DOCUMENT RESUME

ED 340 114 EA 023 547

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TITLE Powerful Stories, Positive Results: Arizona At-Risk Project Report, FY 1990-91.
INSTITUTION Arizona State Univ., Tempe. Morrison Inst. for Public Policy.
SPONS AGENCY Arizona State Dept. of Education, Phoenix.
PUB DATE 15 Nov 91
NOTE 194p.; For the Policy Report, see EA 023 563.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS Academic Achievement; *Educationally Disadvantaged; Elementary Secondary Education; *High Risk Students; *Intervention; Outcomes of Education; *Program Effectiveness; *Program Implementation; State Programs; Student Development
IDENTIFIERS *Arizona

ABSTRACT

Outcomes of 1990-91 Arizona At-Risk Pilot Project for grades K-3 and 7-12 are described in this third in a series of annual evaluation reports. The evaluation focuses on effective strategies in the context of the total school environment, examining both implementation processes and outcomes. Following an introduction, chapter 2 describes the evaluation methodology. Data were derived from student profiles, program narratives, district-reported participation, teacher and 7-12 student surveys, interviews, a cohort study, and retention and budget information. The third chapter provides descriptions and evaluation results of the K-3 at-risk programs, including attendance, academic achievement, and promotion/retention. Information on the 7-12 programs is presented in chapter 4, focusing on delivery systems, services, and student outcomes. A budget analysis is provided in chapter 5, and a summary and recommendations are offered in the concluding chapter. Findings indicate the overall positive impact of the K-3 and 7-12 pilot programs; identify regional differences; and demonstrate the importance of implementation for program success. Forty-six tables and 19 figures are included. Appendices contain K-3 and 7-12 supplemental data, budget data, and limitations of data sets. (22 references) (LMI)

POWERFUL STORIES, POSITIVE RESULTS

Arizona At-Risk Project Report

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Arizona At-Risk Project Report

FY 1990-91

Prepared for:
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State Superintendent of Public Instruction
Arizona Department of Education

For Submission to:
Arizona State Legislature

November 15, 1991

POWERFUL STORIES, POSITIVE RESULTS

ARIZONA AT-RISK PROJECT REPORT
FY 1990-91

by

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PREFACE/ACKNOWLEDGEMENTS

Prepared by Morrison Institute for Public Policy, School of Public Affairs, Arizona State University, this annual evaluation report is the third in a series to describe the *Arizona At-Risk Pilot Project* for grades K-3 and 7-12. A companion report, the *Arizona At-Risk Pilot Project Policy Report*, discusses policy issues gleaned from the research that are considered essential for developing state level policies relevant to educational programming and funding for at-risk youth.

The at-risk pilot project was initiated in FY 1988-89 with passage of H.B. 2217 (1988). This legislation sought to address the needs of at-risk students in Arizona by establishing pilot sites across the state, and committing funding to them through FY 1991-92. Altogether, 55 pilot sites comprise the project; 33 "phase I" districts were funded in FY 1988-89, and an additional 22 "phase II" programs were funded in FY 1989-90. Phase I programs, therefore, have just completed their third year of the four year project, while phase II programs have just completed their second year.

As external evaluator on behalf of the Arizona Department of Education (ADE), Morrison Institute has compiled and analyzed data from the 55 projects through FY 1990-91. Much of this data has already been reported individually for each of the programs in the various "FY 1990-91 Summative Evaluation Reports" that were prepared by Morrison Institute in June 1991 and submitted to ADE. Those reports, which are maintained at ADE and Morrison Institute, contain detailed descriptions of specific services implemented by the individual programs. In contrast, this report provides a synthesis and discussion of the data, and presents conclusions that can be drawn about program services.

Many people participated in the evaluation study and assisted in the preparation of this report. Dr. Rob Melnick, Director of the Morrison Institute, has continually provided guidance and leadership. Dr. Louann Bierlein, Jane Champagne, Jill Engmark, Andrea Greene, Cindy Hartwell, Rick Heffernon, Dr. Carol Kamin, Dr. Cecilia Lopez, Julie Martin, Linda Sandler, Mae Shores, Dr. Judy Vandegrift, and Nancy Welch all served as site evaluators whose work resulted in a series of formative and summative individual program reports used in preparing this report. Individually and collectively, their efforts have extended to many other tasks allowing this report to come to fruition. Special thanks to Cindy, for coordinating data collection; Mae, for compiling participation data; and Rick, for preparing the interview data and editing the report.

Over the years, Dr. Tom Haladyna and Dr. Howard Sullivan provided guidance and support in certain technical aspects of the evaluation. Thanks, too, to Dr. Gene Glass for adding insight regarding the cohort analysis. Special recognition goes to Nelle Moore, for her expertise and assistance in designing, managing, and analyzing an extensive database. Her contributions were invaluable.

Past and present graduate students who assisted in various phases of the evaluation project and deserve recognition are: Debra Allman, Romero Jalamo, Daniel Kyman, Deborah Lowther, Jonathon Lurie, and Barbara Martinez. Barbara's 1990-91 analysis of retention data was particularly valuable. Special thanks go to all Morrison Institute office staff and technical support personnel, particularly Tracy Gay-Holliday, who assisted with the development of this report.

The cooperation and collaboration of the Arizona Department of Education and the participating sites were invaluable towards completing this report. The K-3 Advisory Committee/At-Risk Subcommittee was extremely helpful in reviewing particular documents and providing valuable feedback used in the evaluation process. At the Arizona Department of Education, Dr. Paul Koehler, Trudy Rogers, Sandy Wedeen, and Dr. Kathy Hayden were important when it came to answering questions and obtaining data.

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INTRODUCTION

The intent of the at-risk grants initiated under H.B. 2217 (1988) has been twofold: 1) to encourage schools to develop innovative strategies for addressing the needs of at-risk students, and 2) to integrate those strategies with other programs within the schools. In conjunction with these intentions, the goal of the evaluation effort has been to determine which strategies have been most successful (i.e., "what works" for at-risk youth), and provide feedback about them to ADE and legislators. Over the last three years, however, as at-risk programs have become more integrated into total school structures, it has become increasingly clear to evaluators that "what works" goes beyond the scope of specific at-risk program strategies. In fact, *what* works has to be defined in terms of *how* it works. Therefore, evaluators have had to examine strategies in the context of the total school environment.

To accomplish this task, the evaluation plan has relied on the premise that understanding program processes and the implementation strategies employed by districts is as important as measuring student outcomes. *The process is as important as the product.* Critical considerations included: Who was involved in program planning? Did more involvement of staff in program planning result in more effective practices in the classroom? How important was open communication in bringing about change? Were school/community linkages important in successful programs, and what type of linkages? How did parents want to be involved? And, ultimately, what can the state of Arizona do to promote the types of changes that will help at-risk students become successful students? With these questions in mind, Morrison Institute administered site visits, interviews, surveys of staff and students' perceptions of at-risk programs, and profiles of student characteristics. All of these combined to "paint the picture" of the social emotional, and educational environment in which Arizona's at-risk children live and learn.

Merely increasing our understanding of the change process and the at-risk program context, however, is not meaningful in and of itself. Rather, what is learned must be applied to determining how an education system can be made to be more responsive to the needs of at-risk students. Therefore, evaluators have looked at several indicators related to student success: school attendance, promotion to the next grade, sense of worth, credits earned, and academic achievement. Determining the degree to which these student outcomes were achieved has become a goal of the evaluation effort.

This project report aggregates data for all 55 projects (42 K-3; 13 7-12). For the purposes of the report, however, the aggregate data have been analyzed to reveal patterns that apply across programs. Trends over the three years of the project are shown for certain indicators. Additionally, FY 1990-91 evaluation data were disaggregated by region (urban/suburban, rural, and reservation) and by phase (I and II for K-3 only) in order to examine the hypothesis that "what works" might vary according to these distinctions. In fact, there *are* noteworthy differences among programs which will be discussed throughout this report.

Table 1-1 and Figure 1-1 on the following pages show the distribution of the 55 programs by region and phase as well as by their geographical locations. Subsequent chapters in this report present detailed information about evaluation methodology, the K-3 and 7-12 programs, program budgets, and conclusions. A companion report, the *Arizona At-Risk Pilot Project Policy Report,* discusses policy issues gleaned from the research that are considered essential for developing state level policies relevant to educational programming and funding for at-risk youth.

Another report on the *Arizona At-Risk Pilot Project* is forthcoming in June of 1992--at the conclusion of the fourth year of the project. This report will consist of an in-depth look at successful practices implemented by specific at-risk pilot districts, including student-oriented educational and support programs, parent involvement activities, and staff training. This report, entitled "Promising Practices for At-Risk Youth," is intended to provide educators with blueprints for replicating successful processes, strategies, and outcomes.

Table 1-1

ARIZONA AT-RISK PILOT PROGRAMS

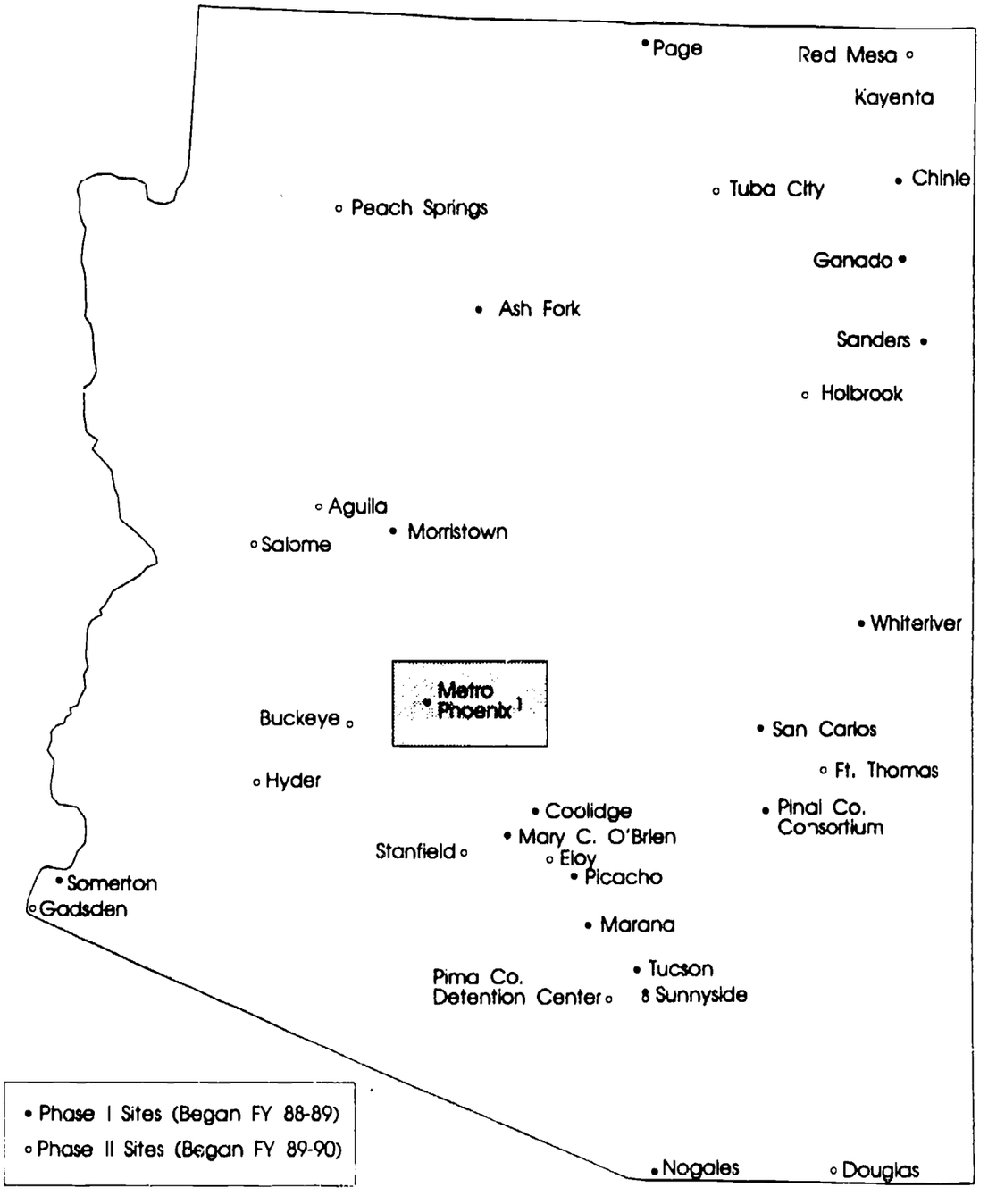
	Urban/Suburban	Rural	Reservation*
K-3			
• Phase I (Began FY 1988-89)	Creighton Elementary Laveen Elementary Littleton Elementary Murphy Elementary Osborn Elementary Phoenix Elementary Roosevelt Elementary Wilson Elementary	Ash Fork Unified Coolidge Elementary Mary C. O'Brien Elementary Morristown Elementary Nogales Unified Picacho Elementary Somerton Elementary	Chinle Unified Ganado Unified Kayenta Unified Page Unified San Carlos Unified Sanders Unified Whiteriver Unified
• Phase II (Began FY 1989-90)	Avondale Elementary Isaac Elementary Balsz School** (Balsz) El Mirage School** (Dysart) Los Panchitos School** (Sunnyside) Scales School** (Tempe)	Aguila Elementary Buckeye Elementary Douglas Elementary Eloy Elementary Gadsden Elementary Hyder Elementary Salome Consolidated Stanfield Elementary	Fort Thomas Unified Holbrook Unified Red Mesa Unified Peach Springs School** (Peach Springs) Cameron School** (Tuba City) Gap School** (Tuba City)
7-12			
• Phase I (Began FY 1988-89)	Creighton Elementary (7-8) Dysart Unified Sunnyside Unified Tucson Unified	Nogales Unified Pinal County Consortium • Apache Junction Unified • Casa Grande Elem. (7-8) • Casa Grande UHS • Central AZ. Alternative • Coolidge Unified • Mammoth-San Manuel Unified • Maricopa Unified • Santa Cruz Valley UHS • Superior Unified Somerton Elementary (7-8)	Ganado Unified Kayenta Unified San Carlos Unified (7-8) Sanders Unified
• Phase II (Began FY 1989-90)	Pima Co. Detention Center	Marana Unified	

* These districts are located on reservations or are in locations with Native American student populations of approximately 50%.
** These are school-based projects. Districts are indicated in parentheses.

NOTE: Urban/suburban programs are referred to as "urban" throughout this report.

Figure 1-1

ARIZONA AT-RISK PILOT SITES



[1] Metro Phoenix area sites are:

Phase I -- Creighton, Dysart, Laveen, Littleton, Murphy, Osborn, Phoenix, Roosevelt, and Wilson

Phase II - Avondale, Balsz, Dysart, Isaac, and Tempe

Chapter 2

EVALUATION METHODOLOGY

This chapter provides an overview of the methodology employed in the *Arizona At-Risk Pilot Project* during FY 1990-91. While it includes some retrospective information, it does not repeat prior discussions of project methodology documenting the specifics of previous years' efforts. For those, the reader is referred to the *Arizona At-Risk Pilot Project FY 1989-90 Project Report* (Bierlein, Vandegrift, Hartwell, Sandler & Champagne, 1990) as a supplement to this document.

DESIGN OVERVIEW

In June of 1989, *after* the first year of the pilot project (FY 1988-89)[2], Morrison Institute was commissioned by the Arizona Department of Education to design and implement a comprehensive project evaluation. A "design team" of evaluation and assessment experts scrutinized the feasibility of conducting a true experimental or quasi-experimental study comparing program and non-program participants. This team dismissed a control group study as unrealistic, primarily because of the magnitude of the project (33 "phase I" sites already in operation and 22 "phase II" sites approved for FY 1989-90) and projected difficulties acquiring meaningful comparative data from non-funded control sites.

Perhaps what is more important is that the team decided that determining the "relative worth" of at-risk programming was *not* the most critical issue at stake for the evaluation. Rather, based on demographic projections, exhaustive reviews of articles and research reports, and expert opinion that posited "at-riskness" as an endemic educational problem, the value of at-risk programs was accepted as a given. Evaluation efforts, therefore, focused on determining what strategies, among the many being implemented at the 55 pilot sites, hold most promise for Arizona's at-risk youth--in short, "what works." Attention was also focused on examining the impact of state policy on the development and implementation of programs over the four years prescribed by H.B. 2217 (1988).

The overall evaluation design adopted a long-term, in-depth approach in order to generate detailed descriptions of program implementation processes, services, and outcomes. This design integrated the use of both qualitative and quantitative methods. Data were collected via site visits incorporating observation and interviewing, district self-reported program information (including participation data, self-evaluation studies, cohort data, retention rate information for K-3 sites, and budget information), and surveys administered to teachers and grade 7-12 students. In addition, narrative report guidelines, standard interview "protocols," surveys, and numerous standard reporting forms were developed and refined and regular training sessions were held with both site directors and evaluators.

The question of "what works" was addressed using cross-site analyses through which patterns of program similarities and differences were identified--in clientele, settings, strategies, and implementation. As patterns emerged, they formed a basis for aligning reports, interviews, surveys, and forms. The

[2] While funding was appropriated and allocated to districts during 1988, most programs were only in operation for a maximum of one semester (January - June 1989).

alignment generated multiple sources of data that were triangulated[3] to discern areas of consensus regarding "what works" in terms of such issues as: which programs reach the most students, parents, and/or staff; which programs prompt organizational change (e.g., "systemic reform"); and, which practices are viewed as successful through the eyes of students, teachers, administrators, counselors, aides, parents, and community members.

In conjunction with descriptive databases, program evaluation efforts included a "cohort study" in which academic histories for a randomly selected group of student participants were tracked over time. This tracking effort, essentially mandated by H.B. 2217 (1988), was based on an assumption that "what works" might be defined in terms of objective evidence of positive change in test scores, absenteeism, rates of failure, credits earned, and other recognized indicators of success.

Superimposed on the question of "what works" was the additional question: "For whom?" This, in turn, prompted other questions that figured prominently in data collection and analyses, such as: How comparable are at-risk students? Do different types of students benefit from different kinds of services? What works for parents in terms of increasing their involvement? What works for staff in terms of developing the skills needed to work with at-risk students and their parents?

Quantitative databases (e.g., cohort study) were designed with parameters and constraints relevant to more rigorous research designs (e.g., reliability, validity). Qualitative databases were designed keeping in mind "criteria of soundness [that] more accurately reflect the assumptions of the qualitative paradigm" including credibility, transferability, dependability, and confirmability (Marshall and Rossman, 1989, pp. 144-145). Each database has its own merits, caveats, and limitations. Also each database is only one of many used in defining "what works"; *no single data set fully describes the phenomena being examined.* Taken as a whole, however, trends emerge regarding programs and activities that hold promise for at-risk youth in Arizona and the policy issues that need to be addressed to enable such programs to flourish.

As a result of the study's design and data collection efforts outlined above, the following databases were compiled during FY 1990-91:

1) student profile data completed by school personnel for 3,618 at-risk K-3 students and by 1,627 at-risk 7-12 students;

2) descriptive narrative data compiled by individual site evaluators (phase I) and district personnel (phase II) for each of the 55 individual programs;

3) participation data for students, parents, and staff reported by district personnel and confirmed by Morrison Institute staff;

4) survey data (e.g., mean ratings) obtained from 1,021 K-3 teachers and 982 7-12 staff members;

5) open-ended question responses regarding program strengths and recommendations for change reflecting 4,042 comments from K-3 teachers and 1,041 comments from 7-12 staff members;

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[3] As described by Marshall and Rossman (1989), triangulation is one strategy to enhance a qualitative study's credibility and generalizability. It is "... the act of bringing more than one source of data to bear on a single point [such that] data from different sources can be used to corroborate, elaborate, or illuminate the research in question" (pp. 146; cf. Rossman and Wilson 1985).

6) open-ended question responses regarding program outcomes obtained from 986 K-3 teachers and 843 7-12 staff members;

7) survey data obtained from 1,627 7-12 students;

8) structured interview data collected by the site evaluators encompassing 748 interviews involving 153 parents, 460 school staff (i.e., 220 teachers, 127 administrators, and 113 specialists/support staff), 17 school board members, 18 community members, and 100 students in grades 7-12;

9) demographic and "impact" data (e.g., achievement test scores) following up on 3,958 K-3 students and 1,305 7-12 students who are being tracked longitudinally in the cohort study;

10) information regarding retention (e.g., rates and policies) for 41 of the 42 K-3 programs;

11) budget information for 53 of the 55 pilot demonstration projects.

DATA SETS AND ANALYSES

STUDENT PROFILES

The *K-3 Student Profile* consisted of 30 multiple choice questions, ten that were demographic in nature and 20 that focused on factors often associated with "at-risk status." The student profile was to be completed by the school person who knew the child best; in most cases, this was the child's primary teacher. Districts were asked to profile all or a sample of up to 100 at-risk students served by their programs. Descriptive statistics were computed using *SAS Software for Data Analysis* for all questions for all students, students by phase (I or II), students by region (urban, rural, or reservation), and students by phase and region. Certain items were cross-tabulated to reveal trends of indicators in relation to academic performance by phase, region, and phase by region.

The *7-12 Student Profile* consisted of 30 questions, 11 that were demographic in nature and 19 that focused on factors often associated with "at-risk status." Districts were asked to administer the survey to all or a sample of at-risk students in each one of their program components. Descriptive statistics for all questions were computed using *SAS Software for Data Analysis* for all students and for students by region and by grade level. Similar to analyses of K-3 data, certain items were cross-tabulated with students' self-ratings of academic performance for students as a whole, by region, and by grade level (7-8 or 9-12). Data were *not* disaggregated by phase (as there are only two phase II districts) or region by grade (due to small sample sizes at this level of detail).

PROGRAM NARRATIVES

Descriptive data were generated bi-annually (fall and spring) by a team of site evaluators for each of the 33 phase I sites, and annually (spring) by district personnel for each of the 22 phase II sites. Since the summer of 1989, a series of five reports[4] per phase I district and two reports per phase II district have been generated. Both phase I and phase II site narratives were prepared following model reports and

[4] The first of the five reports was district-generated but edited and formatted by Morrison Institute staff. These reports summarized program activities which occurred during FY 1988-89, the first year of the four-year longitudinal study.

guidelines to ensure that certain common program features were addressed across sites, while allowing unique aspects of each program to be discussed. Reports have varied somewhat over time. For example, initial program descriptions encompassed discussions of planning, needs assessments, and so forth, that were not addressed in subsequent reports. Moreover, more detailed descriptions of program services have evolved over time in light of site evaluators' increased understanding. To help ensure the credibility and confirmability of descriptive data, phase I district personnel were provided opportunities to review draft versions of reports and/or provide written addenda; phase II reports were verified through on-site visits by site evaluators.

Descriptive data were analyzed in a number of ways (e.g., to identify intervention strategies for at-risk youth and their parents, to quantify administrative turnover across programs, to assess common areas of program strengths and weaknesses). In general, such analyses were initially conducted by one or two Morrison Institute analysts and presented back to district personnel and/or Morrison Institute staff for discussion, verification, and/or revision. For example, during the summer of 1990, all district proposals and Morrison Institute formative and summative reports were analyzed to identify and classify student, parent, and staff development activities that are funded and/or formally integrated as part of the at-risk programs. As refined in consultation with ADE and district personnel, this analysis resulted in the development of a list of student service strategies, parent involvement strategies, and staff development strategies used in structuring evaluation efforts.

DISTRICT-REPORTED PARTICIPATION

A review and analysis of FY 1989-90 district-submitted participation data prompted the development of a more structured approach to collecting participation data for FY 1990-91. Lists of student, parent, and staff development strategies (as described in the previous paragraph) provided the structure for new participation reporting forms. For 1990-91, K-3 districts were asked to report all student services delivered through their programs; 7-12 districts were asked to report all student activities delivered by each program component, and to report participation as a result of program linkages with other district-sponsored initiatives and community-based organizations. Several measure were also taken in an effort to ensure the comparability of data across projects.

Fall participation data, submitted by the districts in February 1991, revealed a number of errors and discrepancies--some made by the districts and others due to problems with the data-collection forms. Modifications were made by research analysts at Morrison, and the fall data were returned to the districts for corrections and clarification. Spring participation data submitted in June 1991 revealed fewer reporting errors but still required verification by Morrison Institute staff. This report contains *only* participation numbers reflecting "official" program activities and not those for other (i.e., non-program) district activities, even though some districts included data for the latter type.

Using *Lotus* spreadsheets, data were tabulated by semester and by year, with yearly averages. Data were disaggregated by selected variables (e.g., phase and/or region).

TEACHER SURVEYS

Both the *Arizona At-Risk Pilot Project: K-3 Teacher Survey* and *7-12 Teacher Survey* consisted of 60 multiple-choice questions. Five of the K-3 survey questions and four of the 7-12 survey questions were demographic in nature. The remainder of the items on each survey focused on school/district intervention strategies for students, parents and staff; outcomes; and factors often associated with successful program implementation. Each of the 55 pilot demonstration projects provided Morrison

Institute with the estimated number of staff at the respective school or district. Using a table for determining needed sample sizes for an analysis with a 95 percent level of confidence (Krejcie & Morgan, 1981), Morrison Institute provided each district with the number of surveys needed to complete such an analysis. Districts with very large numbers of teachers (i.e., $\geq$ 100) were directed to randomly sample their population.

Using *SAS Software for Data Analysis*, frequency distributions were tabulated for demographic questions. Teachers rated the remaining items on a Likert scale. Mean scores were calculated for each item and examined with respect to selected respondent variables using Chi-square tests of significance. One variable used for 7-12 analyses concerned the respondent's level of program awareness: program staff members *versus* non-program staff members who were either aware or unaware of the district's pilot at-risk program. This breakdown, prompted through discussions with 7-12 program staff, was included because many 7-12 programs are self-contained and vary in their degree of integration with other school services. A "program awareness" variable did not appear as an issue with respect to K-3 programs. However, this may be a variable worth exploring among K-3 school staff in the future.

In addition to the 60 multiple-choice questions, teachers were given several open-ended questions regarding program strengths, recommendations for change, and selected program outcomes. Questions were analyzed by category (e.g., student services) and/or selected respondent variables.

INTERVIEWS

Structured interviews conducted with school personnel, parents, community members, and 7-12 pilot program students followed interview "protocols" designed by Morrison Institute staff. This was to ensure that the 11 site evaluators focused on similar issues for each of the programs. However, following ethnographic interviewing techniques such as those described in Spradley (1979), site evaluators were encouraged to follow-up "standard" questions with more in-depth questions as relevant. Questions focused primarily on most and least effective services for students, parents, and staff and on the integration of services within the school and with the community. Program changes and recommendations were also elicited. Site evaluators preserved the confidentiality of their interviewees in an effort to ensure integrity of the data.

Interview data were analyzed across several categories to determine commonalities and discrepancies. Themes related to these factors were then identified. To prevent any bias in the analysis based on findings from other databases, interview data were analyzed by an evaluator who had no knowledge of results from those other databases. Appendix A, Table A-9 portrays the distribution of personnel interviewed for K-3. Interview data for 7-12 programs are shown in Appendix B, Table B-8.

COHORT STUDY

During FY 1989-90, districts were asked to identify all of their at-risk students if their total population was sufficiently small or a sample of their at-risk populations up to 100 students per grade. Using district-submitted lists of students, Morrison Institute randomly selected students for inclusion in the cohort study. Districts then assigned each student included in the study a nine-digit identification code, preferably the student's social security number. Specially designed "cohort coding sheets" were used to collect a variety of demographic, programmatic, and "impact" data for each student identified. Information requested was not only for FY 1989-90, but also for FY 1988-89. Data reported were analyzed using *SAS Software for Data Analysis*. Aggregate data were prepared for the 1989-90 cohort; trend analyses were conducted for those students for whom 1988-89 and 1989-90 data were available.

Based on district feedback and FY 1989-90 analyses, the cohort coding sheets were modified for FY 1990-91. Districts were again asked to complete demographic, programmatic, and impact data for those students originally identified in FY 1989-90. *Analyses for FY 1990-91 (year three of the study) are primarily based upon students in the original cohort group for whom three years of complete data are available.* Additional analyses were conducted using subsets of information from the cohort group.

RETENTION INFORMATION K-3

During spring 1991, each of the 42 pilot project districts received a "retention rate reporting form" that was developed by Morrison Institute in conjunction with the Arizona K-3 Advisory Committee/At-Risk Subcommittee. At-risk project directors or their designees were asked to respond to several questions about retention criteria and policies in the school and/or district. Respondents were encouraged to provide written documentation to support their responses whenever possible, and were also asked to provide detailed retention data for their district's entire K-3 population. Every effort was made to identify inconsistencies and mathematical errors and to provide the most accurate information.

Forty-one districts (representing the 42 programs) were given the retention rate forms; 40 responded representing all 22 phase I programs and 19 phase II programs. Retention information and rates were analyzed by phase, region, and phase by region. Additionally, retention rates for at-risk pilot sites were compared with district-level data that included retention rates from non-participating sites.

STUDENT SURVEYS 7-12

The *7-12 Attitude Survey* consisted of 30 items. Sixteen items focused on student satisfaction with instructional, vocational, and support services received throughout the FY 1990-91 school year. Fourteen questions focused specifically on at-risk pilot program outcomes with respect to specific program components. In order for students to be able to rate the district's program components, the last page of each survey was "customized" using the name of the component the student was to rate (e.g., Alternative School; Mr. Smith's class).

Districts were asked to administer the survey to all, or a sample of, at-risk students served by their programs. Descriptive statistics were computed using *SAS Software for Data Analysis*. Ratings for each program service and outcome were generated according to selected student variables. Chi-square tests of significance were also conducted.

BUDGET INFORMATION

Arizona S.B. 1079 (1991) established a joint legislative committee to study at-risk funding and programs for at-risk pupils and extended the at-risk pilot programs founded under H.B. 2217 (1988) for one additional year (through FY 1992-93). S.B. 1079 (1991) also specified an examination of amounts spent by these programs. Morrison Institute, in consultation with ADE and the state K-3 Advisory Committee, developed the *FY 1990/91 At-Risk Program Grant Breakdown* form requiring that districts prorate their at-risk budgets by function including: district-level and school-level administration, direct student services, parent/community outreach activities, staff development and training, program evaluation, and indirect costs. In addition, districts were to report any unspent monies for FY 1990-91.

The budget form was provided to all 55 programs (42 K-3; 13 7-12). Fifty-three districts responded, representing 40 K-3 programs and all 13 7-12 programs. Of the two K-3 districts excluded from the analysis, one district's report was received well after the submission deadline and after analyses

were completed; one district did not submit the information. Efforts were made to obtain the most accurate information in all cases. Data were analyzed separately for K-3 and 7-12 programs. Program cost-per-pupil figures were calculated for each district and were examined with respect to several key variables (e.g., size of district, region). Appendix C presents supplemental data pertaining to budget analyses.

A NOTE ON THE VALIDITY OF THE DATA

The overall research design, as noted, is conceptually qualitative and particularly subject to scrutiny relative to four criteria: credibility, transferability, dependability, and confirmability. The evaluation team continuously subjected the methods and findings of the study to internal and external review in their endeavor to protect its integrity with respect to these criteria. We are, therefore, confident that these efforts have produced important and meaningful information. With respect to the quantitative databases compiled, sampling methods and analysis techniques were employed in recognition of key variables potentially affecting the reliability and validity of the findings. Morrison Institute evaluators are aware of specific limitations associated with all databases (see Appendix D); the most pertinent of these will be referenced in relation to the analyses presented in subsequent discussions.

In sum, the study involved collection of a large amount of data and information, both quantitative and qualitative[5]. The data sources included self-reports, individual judgments and perceptions, school records, and other items that are subjective in nature and that may reflect bias or contain errors of fact. These types of data sources are *essential* for a comprehensive evaluation but they *must be* interpreted with considerable caution. Consequently, the evaluation team exercised great care in attempting to confirm the accuracy of data while searching for patterns and consensus across related databases. The strength of this evaluation study rests not only in its breadth but in its depth.

[5]Hundreds of data tables were generated from the analyses of all the data sets. Analyses were done by district, by region, by phase (K-3 only) and by grade level (7-12 only). Any data from analyses referenced in this report that is not included in the text or the appendixes is available upon request.

Chapter 3

K-3 AT-RISK PROGRAMS: DESCRIPTIONS AND EVALUATION RESULTS

This chapter synthesizes information from each database compiled for the analysis of the K-3 at-risk programs. After evaluation findings have been presented, the final section will discuss conclusions drawn as a result of the analysis.

DESCRIPTION OF THE K-3 STUDENTS: TEACHER PERSPECTIVES

In order to assess whether or not at-risk programs were meeting the needs of at-risk students, Morrison Institute sought to better understand these needs. Therefore, descriptive data were collected regarding specific factors that place K-3 students at risk. Ideally, this data would have been obtained from standardized databases at the local level, but since such data are largely inaccessible or unavailable, students were profiled, instead, by district personnel using the *K-3 Student Profile* (cf. Chapter 2).

K-3 AT-RISK STUDENT AND FAMILY CHARACTERISTICS

A two-year comparison of teachers' perceptions of at-risk students' family characteristics was conducted to determine whether or not there were annual trends in K-3 student profiles. Although the comparison reveals some differences, key demographic data show that teachers' views of their student populations were fairly reliable over time. Teachers both years, for example, reported that a majority of students lived with both parents (65 percent in 1989-90; 55 percent in 1990-91). Although many teachers did not respond to items related to parent education and employment, when this information was known, teachers reported that most parents/guardians had a high school diploma or less, that mothers/female guardians were largely not employed outside the home, and that most fathers/male guardians occupied "blue collar" jobs.

FY 1990-91 student profile data were disaggregated by region (urban *versus* rural *versus* reservation) and by phase (I *versus* II). Phase I versus II analyses were conducted in response to the notion that program differences might occur in relation to the length of time the programs had been in operation. While phase differences have been found in other databases, comparisons of student profile data revealed few noteworthy demographic differences between phase I and phase II sites.

Regional findings show that urban students made up approximately 37 percent of the 3,618 students profiled, while rural students comprised 32 percent and reservation students 31 percent of the total. Students profiled were similar in all three regions in relation to gender, grade distribution, and achievement levels. A key exception was that reservation programs, as expected, were primarily serving Native American children (Table 3-1).

Perhaps the most noteworthy information depicted in Table 3-1 relates to the category "Academic Rating." Data suggest that *not* all at-risk youngsters were necessarily at risk because they were low achievers. In each region, roughly one out of five students was rated as achieving satisfactorily (i.e., in the high-very high range), yet was considered to be "at-risk."

Table 3-1

COMPARISON OF 1990-91 K-3 AT-RISK STUDENT CHARACTERISTICS BY REGION
(Urban N = 1336; Rural N = 1158; Reservation N = 1124)

Gender	Male	Female	No Response			
Urban	55%	45%	<1%			
Rural	54%	46%	<1%			
Reservation	55%	45%	<1%			
Ethnicity	**White**	**Black**	**Hispanic**	**Native American**	**No Response**	
Urban	20%	11%	62%	5%	2%	
Rural	25%	5%	64%	4%	2%	
Reservation	6%	<1%	2%	92%	1%	
Grade Level	**Kindergarten**	**First**	**Second**	**Third**	**Multi-Grade**	**No Response**
Urban	31%	26%	22%	19%	2%	<1%
Rural	22%	27%	23%	25%	4%	<1%
Reservation	19%	27%	23%	25%	10%	<1%
Academic Rating	**Very Low**	**Low**	**Average**	**High**	**Very High**	**No Response**
Urban	17%	28%	33%	15%	6%	<1%
Rural	18%	31%	32%	13%	6%	<1%
Reservation	15%	29%	38%	13%	5%	<1%

In addition to the information depicted in Table 3-1, the *K-3 Student Profile* was used to gather information regarding students' families. As shown in Table 3-2, family profiles pointed out some regional differences in teachers' perceptions of students' life circumstances. On the whole, more urban children were reported to be living in "broken homes" (i.e., single parent households or with a stepparent) than either rural or reservation children. More reservation children, however, were reported to live with people other than their parents.

A greater number of reservation parents (or guardians) were perceived as having some college--more than in either the rural or urban areas. At the same time, the percentage of unemployed parents/guardians for the reservations was cumulatively (i.e., mothers + fathers) higher than in either of the other two regions. Finally, the number of monolingual speakers of languages other than English was perceived to be higher for rural and urban areas than for reservation areas, but reservation parents were reported to be more proficient bilingually--a characteristic that supports the perception of their higher levels of education.

Table 3-2

COMPARISON OF 1990-91 FAMILY PROFILE FOR K-3 AT-RISK STUDENTS BY REGION
(Urban N = 1336; Rural N = 1158; Reservation N = 1124)

Family Structure	Mother/Father	Natural Parent/ Stepparent	Single Parent	Other	No Response
Urban	50%	10%	30%	4%	5%
Rural	59%	10%	23%	5%	3%
Reservation	57%	8%	21%	9%	5%
Parent Education	**< High School**	**High School**	**Some College**	**College Graduate**	**Don't Know/ No Response**
• Mother					
Urban	27%	18%	4%	1%	50%
Rural	33%	23%	4%	2%	38%
Reservation	20%	29%	10%	2%	39%
• Father					
Urban	16%	13%	3%	1%	66%
Rural	27%	18%	3%	2%	50%
Reservation	15%	24%	7%	2%	52%
Parent Occupation	**Not Employed**	**Laborer/ Clerical**	**Agricultural**	**Professional**	**Don't Know/ No Response**
• Mother					
Urban	42%	[illegible] %	1%	3%	24%
Rural	53%	[illegible]%	2%	3%	12%
Reservation	50%	30%	<1%	6%	14%
• Father					
Urban	5%	37%	3%	6%	52%
Rural	7%	44%	12%	4%	34%
Reservation	19%	39%	3%	3%	33%
Parent Language Skills *(1990-91 survey only)*	**Monolingual (other than English)**	**Limited English Proficient (LEP)**	**Proficient Bilingual**	**Monolingual English**	**Other/No Response**
Urban	18%	15%	19%	43%	6%
Rural	30%	14%	15%	36%	4%
Reservation	5%	32%	38%	16%	8%

PATTERNS OF AT-RISK INDICATORS AND ACHIEVEMENT

The *K-3 Student Profile* also was used to gather information regarding "at-risk indicators" (i.e., factors identified in the literature as contributing to a child being considered at risk of academic failure). These indicators were analyzed in several ways. First, data were examined to identify indicators that occurred with the greatest frequency. Second, indicators were identified that were perceived to negatively affect the academic performance of K-3 students. Third, indicators were examined with respect to their *degree* of negative effect. Fourth, indicators contributing to "at-riskness" were identified across levels of achievement, as well as within levels. All analyses were conducted for the total profiled population as well as for each region. Appendix A (Table A-1) presents the raw data used in these analyses.

How do teachers describe at-risk students?

Table 3-3 depicts percentages of the K-3 student population to whom various at-risk indicators applied, regardless of whether or not the indicator was perceived as negatively influencing academic achievement. This table shows that all three regions share the same "top nine" most frequently occurring indicators (although they occur in different orders). Rank ordered by "TOTAL" frequency, the top indicators of "at-riskness" are:

- No/little parent participation in school-related activities 59%
- Low annual income (less than $15,000/family) 58%
- Few educational/reading materials around the home 56%
- Negative to inconsistent self-esteem of the child 50%
- No/little parent support for child's education 49%
- Difficulties maintaining parent-school communication 47%
- Substandard living conditions (e.g., homes without plumbing or electricity year-round) 44%
- Low levels of English proficiency 42%
- Emotional/behavioral problems exhibited by the child (e.g., stealing) 33%

Table 3-3

% K-3 POPULATION TO WHOM AT-RISK INDICATORS APPLY

URBAN (n = 1336)		RURAL (n = 1158)		RESERVATION (n = 1124)		TOTAL (n = 3618)	
Low annual income	59	Few reading materials	61	Low par. participation	68	Low par. participation	59
Low par. participation	57	Low annual income	60	Low parent support	61	Low annual income	58
Few reading materials	52	Low par. participation	54	Poor comm. w/parents	57	Few reading materials	56
Low self-esteem	49	Low self-esteem	46	Few reading materials	56	Low self-esteem	50
Low parent support	44	Low Eng. proficiency	44	Low self-esteem	55	Low parent support	49
Poor comm. w/parents	42	Poor comm. w/parents	43	Low annual income	54	Poor comm. w/parents	47
Substandard home	42	Low parent support	42	Low Eng. proficiency	52	Substandard home	44
Low Eng. proficiency	32	Substandard home	43	Substandard home	47	Low Eng. proficiency	42
Emot/beh problems	31	Emot/beh problems	31	Emot/beh problems	39	Emot/beh problems	33
≥2 schools attended	31	≥2 schools attended	28	Sub. abuse by parents	29	≥ 2 schools attended	26
Transience/mobility	20	Transience/mobility	19	"Latch-key" situation	26	Health problems	19
"Latch-key" situation	19	Recent immigration	18	Sibling caregiver	23	Sub. abuse by parents	19
Health problems	18	Abusive home	18	Health problems	22	"Latch-key" situation	19
Retained ≥ 1 time	16	Health problems	17	Abusive home	21	Abusive home	18
Sibling caregiver	15	"Latch-key" situation	16	Retained ≥ 1 time	21	Sibling caregiver	18
Abusive home	15	Sub. abuse by parents	15	≥2 schools attended	17	Transience/mobility	17
Sub. abuse by parents	14	Sibling caregiver	14	Transience/mobility	12	Retained ≥ 1 time	16
Recent immigration	12	Retained ≥ 1 time	13	Sibling dropout(s)	11	Recent immigration	12
Sibling dropout(s)	6	Sibling dropout(s)	9	Sub. abuse by child	10	Sibling dropout(s)	9
Sub. abuse by child	2	Sub. abuse by child	4	Recent immigration	4	Sub. abuse by child	5

Further analysis of Table 3-3 suggests that *more at-risk factors are associated with reservation children than with children in other regions.* This finding is supported by data showing that 15 of the 20 at-risk indicators applied to higher percentages of reservation students than to urban or rural students. In comparison, rural students rated higher for only three indicators (i.e., low family income, inadequate

educational/reading materials, and immigration), and urban students rated higher for only two (i.e., ≥ 2 elementary schools attended and transience/mobility).

Which indicators affect K-3 student achievement?

Not all indicators that applied to individual children were perceived as contributing to low achievement. Table 3-4 presents the percentage of children believed to be adversely affected by each indicator. Not surprisingly, Table 3-4 indicates that the nine most frequently occurring indicators also are the nine indicators perceived as negatively influencing the most children. Regional differences may be discerned, however, in the rank order of these indicators. For example, the greatest number of urban and rural children were felt to be affected by a lack of educational or reading materials and low annual incomes, while more reservation children were reported to be affected by a lack of parent participation and low self-esteem.

Table 3-4

% K-3 POPULATION WHOSE ACHIEVEMENT IS ADVERSELY AFFECTED							
URBAN (n = 1336)		RURAL (n = 1158)		RESERVATION (n = 1124)		TOTAL (n = 3618)	
Few reading materials	48	Few reading materials	51	Low par. participation	46	Few reading materials	47
Low annual income	46	Low annual income	41	Low self-esteem	45	Low par. participation	44
Low par. participation	45	Low par. participation	40	Low parent support	44	Low self-esteem	43
Low self-esteem	44	Low self-esteem	38	Few reading materials	43	Low annual income	40
Low parent support	38	Low Eng. proficiency	34	Low Eng. proficiency	38	Low parent support	38
Poor comm. w/parents	36	Poor comm. w/parents	34	Poor comm. w/parents	37	Poor comm. w/parents	36
Substandard home	34	Low parent support	33	Low annual income	32	Low Eng. proficiency	32
Emot/beh problems	28	Substandard home	31	Emot/beh problems	30	Substandard home	31
Low Eng. proficiency	24	Emot/beh problems	25	Substandard home	29	Emot/beh problems	28
≥2 schools attended	23	≥2 schools attended	17	Sub. abuse by parents	21	≥ 2 schools attended	17
Transience/mobility	17	Transience/mobility	15	Abusive home	17	Sub. abuse by parents	15
Health problems	15	Recent immigration	13	"Latch-key" situation	16	Health problems	14
Abusive home	14	Abusive home	13	Health problems	15	Abusive home	14
Sub. abuse by parents	13	Health problems	13	Sibling caregiver	12	"Latch-key" situation	13
"Latch-key" situation	12	Sub. abuse by parents	10	Retained ≥ 1 time	9	Transience/mobility	12
Sibling caregiver	11	"Latch-key" situation	10	≥2 schools attended	8	Sibling caregiver	10
Recent immigration	10	Sibling caregiver	7	Sibling dropout(s)	6	Retained ≥ 1 time	8
Retained ≥ 1 time	8	Retained ≥ 1 time	6	Transience/mobility	6	Recent immigration	8
Sibling dropout(s)	5	Sibling dropout(s)	4	Sub. abuse by child	6	Sibling dropout(s)	5
Sub. abuse by child	1	Sub. abuse by child	<1	Recent immigration	<1	Sub. abuse by child	2

In accordance with previous conclusions, Table 3-4 indicates that *more reservation children are adversely affected by at-risk factors than are children in urban or rural areas.* Thirteen of 20 indicators were rated as affecting a higher percentage of reservation children than others. In contrast, only five indicators reportedly affected more children in urban areas (multiple school attendance, mobility, substandard living conditions, low family income, and health problems), and only two indicators affected more children in rural areas (inadequate educational/reading materials and immigration).

To what degree do indicators affect achievement?

For each indicator, means were tabulated showing the degree to which teachers felt indicators negatively influenced the academic achievement of their students. The results are ranked in Table 3-5 by severity, regardless of how many children were affected. Examining Table 3-5, one can see that urban teachers felt that parental substance abuse had the most detrimental impact on students, while rural teachers felt that a lack of reading (and educational) materials and low self-esteem most severely affected their students. Teachers serving large percentages of Native American children believed low self-esteem had the most negative effect on their student population.

One finding derived from Table 3-5, in conjunction with Table 3-3 and 3-4, deserves particular mention--especially in view of the mandates of H.B. 2217 (1988) which directed schools to address parent involvement in their programs. As expected, Table 3-4 shows that relatively large percentages of children were believed to be affected by a lack of parental involvement. *But while Table 3-4 shows that more students were affected by lack of parental participation than lack of parental support, Table 3-5 clearly indicates that lack of parental support was believed to have a more severe impact on achievement.*

Table 3-5

RANK ORDER OF K-3 AT-RISK INDICATORS BY DEGREE OF NEGATIVE EFFECT

URBAN (n = 1336)		RURAL (n = 1158)		RESERVATION (n = 1124)		TOTAL (n = 3618)	
Sub. abuse by parents	3.41	Few reading materials	3.15	Low self-esteem	3.14	Few reading materials	3.21
Abusive home	3.39	Low self-esteem	3.15	Sub. abuse by parents	3.13	Low self-esteem	3.21
Few reading materials	3.39	Poor comm. w/parents	3.10	Emot/beh problems	3.10	Sub. abuse by parents	3.18
Low self-esteem	3.33	Low parent support	3.08	Few reading materials	3.09	Abusive home	3.15
Low parent support	3.26	Emot/beh problems	3.06	Abusive home	3.08	Emot/beh problems	3.14
Emot/beh problems	3.25	Low Eng. proficiency	3.05	Poor comm. w/parents	3.03	Low parent support	3.11
Transience/mobility	3.25	Sub. abuse by parents	3.03	Low Eng. proficiency	3.01	Poor comm. w/parents	3.11
Recent immigration	3.22	Abusive home	3.00	Low parent support	3.00	Low Eng. proficiency	3.06
Poor comm. w/parents	3.20					Transience/mobility	3.04
Health problems	3.16					Low par. participation	3.04
Low par. participation	3.15	Recent immigration	2.99	Low par. participation	2.97	Health problems	3.04
Substandard home	3.15	Health problems	2.98	Health problems	2.96	Recent immigration	3.01
Low Eng. proficiency	3.15	Low par. participation	2.98	"Latch-key" home	2.86		
"Latch-key" home	3.12	Transience/mobility	2.97	Low annual income	2.84		
Low annual income	3.10	Substandard home	2.93	Substandard home	2.82	Substandard home	2.97
Sibling dropout(s)	3.07	"Latch-key" home	2.93	Sub. abuse by child	2.75	"Latch-key" home	2.96
≥2 schools attended	3.07	Low annual income	2.89	Transience/mobility	2.74	Low annual income	2.96
		≥ 2 schools attended	2.87	Sibling dropout(s)	2.70	≥ 2 schools attended	2.92
		Care for siblings	2.71	≥ 2 schools attended	2.67	Care for siblings	2.74
Care for siblings	2.90	Retained ≥ 1 time	2.54	Care for siblings	2.63	Sibling dropout(s)	2.72
Sub. abuse by child	2.90			Retained ≥ 1 time	2.59	Sub. abuse by child	2.76
Retained ≥ 1 time	2.69					Retained ≥ 1 time	2.59
		Sibling dropout(s)	2.45				
		Sub. abuse by child	2.14	Recent immigration	2.21		
No indicator(s) <	2.50					No indicator(s) <	2.50

* Scales divide ranges of mean scores and can be interpreted using the following scale: 2.0 = Applies but has NO negative effect on academic performance; 3.0 = Applies and has SOME negative effect; 4.0 = Applies and has a LARGE negative effect

Perhaps even more noteworthy is the finding that *urban teachers consistently rated indicators as having a greater degree of negative effect on their students than did their rural and reservation colleagues, despite the fact that the indicators themselves were more prevalent in the other two regions.* Data reveal that 18 out of 20 indicators were perceived as having a higher degree of negative impact on urban students than on rural or reservation students. These findings suggest differences in how educators in the three regions perceive the effects of indicators on student achievement.

Are there patterns of indicators in relation to academic achievement?

An analysis of the indicators was conducted for students rated in each of five achievement categories: very high, high, average, low, and very low. Predictably, this analysis shows that *a greater number of indicators* were perceived as *more detrimental* for low achievers than for high achievers. This holds true for the profiled K-3 students regardless of region (see Appendix A, Table A-2).

While low achieving children are generally *more* at risk, there *are* indicators that effectively describe high achieving children considered to be at risk. These indicators vary across regions. For example, urban high achieving children were perceived as most affected by parental substance abuse, while rural high achievers were most likely to be affected by "latch-key" situations. Reservation high achievers were felt to be most negatively affected by health problems.

A more important question in this analysis was: Are there specific indicators that consistently distinguish among students achieving at different levels? To answer this question, indicators were examined to see which, if any, had negative effect mean ratings that increased across performance categories. Table 3-6 highlights the results of this analysis as broken down by region.

Table 3-6

INDICATORS THAT DISTINGUISH VERY LOW FROM VERY HIGH K-3 ACHIEVERS		
URBAN	**RURAL**	**RESERVATION**
No/low English proficiency	**No/low English proficiency**	**No/low English proficiency**
≥2 elementary schools attended	≥2 elementary schools attended	
Low parent participation	Low parent participation	
	Retained at least once	Retained at least once
Responsible for siblings		Responsible for siblings
Unique to urban programs:	**Unique to rural programs:**	**Unique to reservation programs:**
Low parent support of child	Few reading/ed. materials	Living conditions
Low self-esteem	Low annual income	Transience/mobility
Abusive home	Sibling dropout(s)	
Emotional/behavior problems	Substance abuse by child	
Latch-key situation	Substance abuse by parent	
Poor parent communication	Recent immigration	

Table 3-6 reveals that *only one indicator consistently appears "predictive" of low academic achievement: low English proficiency.* But, perhaps more significant is the fact that only five indicators

show a trend across performance for reservation children. This implies that most indicators are viewed as affecting reservation children equally, regardless of their level of performance. In contrast, ten of 20 indicators show trends across performance for urban and rural children indicating that these children are more readily distinguished as higher or lower achieving children on the basis of specific indicators.

DESCRIPTION OF THE K-3 PROGRAMS

This section highlights the specific services and activities undertaken by school districts to serve at-risk students. As described in the *FY 1989/90 Project Report for the Arizona At-Risk Pilot Project* (Morrison Institute, 1990), K-3 program services will be discussed in terms of services provided to three target groups: students, parents, and staff.

STUDENT SERVICES

Improved academic performance, self-esteem, and social development among at-risk children were common goals of virtually every district receiving at-risk funding. The specific activities for attaining them, however, differed. To find commonalities among them, strategies were analyzed across all 42 programs. From this analysis, nine broad strategies were identified as most common among the pilot sites. These nine formed the organizational framework for collecting student services data from districts.

Table 3-7

K-3 STUDENT SERVICE STRATEGIES*

Strategy #	Strategy
1.	Implement Alternative Delivery Systems
2.	Reduce Student/Staff Ratios
3.	Alter Classroom Instruction/Implement Curriculum Modifications
4.	Supplement Individualized Instruction (Tutoring)
5.	Provide "Special" Activities/Services (Support and/or Enrichment)
6.	Extend Instructional Services During the Summer
7.	Add/Expand Facilities
8.	Enhance On-Going Assessment
9.	Add/Expand Counseling/Other Social Services

* The numbering of the strategies is arbitrary. For the sake of continuity, the numbering system will be preserved in subsequent discussions as it was used by Morrison Institute and the districts in coding and recording these activities.

Implement Alternative Delivery Systems (Strategy #1): Supported by at-risk funds, 16 districts implemented a total of 23 "alternative" systems for delivering student services. Each differs significantly from systems in place prior to H.B. 2217 (1988). Such alternative delivery systems included full-day kindergartens, restructured classroom groupings, magnet programs, and other programs specifically tailored to the needs of at-risk populations. For example, the Wilson District established "Welcome Rooms" for highly transient students who would be enrolled in the district for only a short time. "Welcome Rooms" offered more individualized basic skills instruction than regular classrooms, and provided transition time for students who might have attended many schools. They also allowed more stability in regular classrooms by concentrating student turnover in one central location.

Reduce Student/Staff Ratios (Strategy #2): Twenty-two districts sought to increase individualized instruction in the "regular" classroom by reducing student/staff ratios through the hiring of additional teachers, aides, or both. Instructional aides typically assist teachers by working with individual students or small groups to reinforce or provide additional practice on specified skills.

Alter Classroom Instruction/Implement Curriculum Modifications (Strategy #3): One of the most pervasive strategies reported was to adopt curriculum reform and/or different instructional techniques in the classroom. Fully 78 percent of the K-3 at-risk programs employed this strategy using grant funds, while the balance funded such changes through other sources. One subcategory of this strategy involves the use of "developmentally appropriate practices" (DAP) which are research-based activities demonstrated to be compatible with early childhood development and learning theories (Bredekamp, 1987). Such practices include developing integrated thematic units; teaching listening, speaking, reading, and writing as integrated skills through the whole language approach; using manipulative objects in mathematics instruction; increasing hands-on activities; and placing students in cooperative groups for some instructional activities.

A second category of instructional change involved increasing the use of computer-assisted instruction (CAI) in the regular classroom. Toward this end, seven districts purchased computers for specific classroom applications, such as publishing activities that allow students to apply the writing process to their assignments. Providing CAI within the classroom was particularly popular in rural and reservation programs.

Supplement Individualized Instruction (Strategy #4): Sixteen districts provided supplemental instructional for students through individualized tutorials that met before, during, or after school. In the Osborn District, for example, students received reading tutorials in-class as well as after school; in Douglas, students at risk of being retained were targeted for tutoring before, during, or after school.

Provide "Special" Activities/Services (Strategy #5): About half of the districts implemented "special" activities or services designed to complement or reinforce the regular curriculum. These included "instructional support" activities which were highly integrated with the regular curriculum and provided systematic follow-up, or "instructional enrichment" activities which were not necessarily integrated with the curriculum and did not provide systematic follow-up. In Kayenta, for instance, instructional *support* was provided in the form of take-home backpacks which contained a book, a tape record of the book, and a cassette player. These could be read, or listened to, by the child and parent together. The parent then completed a follow-up survey providing feedback to the teacher about the activity. Instructional *enrichment*, on the other hand, typically included field trips, classroom libraries, or supplemental instructional materials.

Extend Instructional Services During the Summer (Strategy #6): Twenty districts incorporated summer school or other summer services into their at-risk programs. While some summer school programs emphasized the continuing development of academic skills, others focused on providing students with enriching experiences. Many schools opened their libraries to students and families for designated periods during the summer.

Add/Expand Facilities (Strategy #7): Nineteen districts added or expanded facilities *other than regular classrooms* for the purpose of enhancing instructional services. Several of these districts (e.g., Wilson and Eloy) established or expanded computer labs. Others added indirect service facilities, such as Ganado's closed circuit television service, to all K-3 classrooms.

Enhance On-Going Student Assessment (Strategy #8): In order to better identify at-risk children and their needs, eight districts implemented new or revised screening and assessment procedures for students. In addition, several districts revised or modified on-going student assessment procedures in keeping with developmentally appropriate practices. In Whiteriver, for example, students were screened using Apache language assessments; in Buckeye, a Child Study/Student Assistance Team processed referrals from teachers and planned appropriate interventions for specific at-risk students.

Add/Expand Counseling/Other Social Services (Strategy #9): Eight districts incorporated counseling or other types of social services into their programs in order to meet the needs of their at-risk students. For example, the Creighton district provided small group counseling and the services of a social worker for at-risk students. In Littleton, a community liaison was hired to assist students and their families with referral services.

* * * * *

Data collected during 1989-90 reflected the strategies used by each pilot site and the number of students receiving each type of service. During that first year of the evaluation, districts were directed to report a strategy only if it was supported directly by at-risk funds. As the programs evolved, however, more and more integration occurred between at-risk program strategies and other programs targeting at-risk students that were funded by the districts. For example, some program sites had full-day kindergarten that was supported by at-risk funding, while others offered full-day kindergarten funded from other sources.

Since program integration was an inherent goal of the at-risk grants, Morrison Institute attempted to portray the extent to which districts were integrating at-risk funded and district-funded student services. In 1990-91, therefore, districts were asked to report *all* at-risk strategies being employed by their school or district, and to indicate whether each strategy was funded by the at-risk grant or by the district (though actual student participation numbers were reported only for at-risk funded strategies). As a result, at-risk programs could be viewed within the context of other programs already in place in the school or district (see Appendix A, Table A-3).

PARENT SERVICES

H.B. 2217 (1988) required districts to identify "procedures for involving parents in the program." An updated analysis of the 42 K-3 at-risk pilot programs revealed four major strategies for involving parents. In reporting parent services for 1990-91, districts distinguished at-risk funded activities from district funded activities, much as they did for student services. The results are depicted in Appendix A, Table A-4. As with student services, this format provides perspective on the range of parent services provided, regardless of the funding source. The four major strategies to involve parents are shown on the following page in Table 3-8 and subsequently described.

Table 3-8

K-3 PARENT SERVICE STRATEGIES	
Strategy #	Strategy
1.	Increase Home/Community Outreach Efforts • Written communication • Verbal communication (including telephone calls) • Home visits
2.	Increase Opportunities for School-Based Involvement • Implement formal classroom volunteer programs • Include parents as members of school advisory boards • Offer school social events
3.	Upgrade Parent Skills • Offer presentations and workshops • Sponsor formal classes (e.g., ESL, G.E.D.)
4.	Enhance Counseling/Social Services

Increase Home/Community Outreach Efforts (Strategy #1): Broadly defined, this strategy for involving parents encompassed efforts by school personnel to get information and/or deliver services to parents in their homes and communities. Every K-3 program offered some type of home/community outreach component, either directly funded through the at-risk program or supported by the district. Such efforts included **increased written communication** and **increased community contacts**. A number of districts also conducted **formal home visits**, and many aimed to involve parents with their children by assigning **home instructional activities** to be completed jointly.

Increase Opportunities for School-Based Involvement (Strategy #2): About two-thirds of the K-3 programs made efforts to increase parent participation through on-site school activities. These efforts included three major categories of participation: **parents as classroom volunteers**, parent membership on **school advisory boards** for the at-risk program, and parent participation in **school "events."**

Upgrade Parent Skills (Strategy #3): A majority (86 percent) of districts attempted to involve parents by offering opportunities, such as **presentations and workshops**, for the purpose of improving parental skills. Additionally, several districts offered/sponsored **formal classes** providing parents opportunities to upgrade their own skills/abilities, sometimes for college credit.

Enhance Counseling/Social Services (Strategy #4): About one-half of the at-risk programs addressed the physical, social, and economic needs of parents. These services ranged from providing referrals to social service agencies that provide family assistance to counseling parents on topics such as student absenteeism or drug abuse.

STAFF SERVICES

Staff development was a major focus of many at-risk programs during year one of program implementation. Although staff development continued to be offered during years two and three, most programs began encouraging the implementation and refinement of new teaching strategies rather than introducing additional topics. As with student and parent services, some staff services were supported by at-risk funds, while others were related to at-risk programs but funded by the district. Primary strategies for implementing staff training are depicted in Table 3-9 and subsequently described.

Table 3-9

K-3 STAFF DEVELOPMENT STRATEGIES	
Strategy #	Strategy
1.	Provide Workshops/In-service Training
2.	Encourage attendance at conferences/academies
3.	Sponsor formal classes
4.	Conduct regularly scheduled at-risk program meetings
5.	Sponsor school visitations/observations

Provide Workshops/In-service (Strategy #1): Virtually all districts provided and/or sponsored activities such as formal lectures, training workshops, and teleconferences. Workshops/in-service training addressed a variety of subjects. They were led by peers and professional consultants, and were offered on and off-site. During 1990-91, districts tended to reduce the number of regular (e.g., weekly) workshops and, instead, scheduled workshops on an as-needed basis as determined by the teaching staff.

Encourage Attendance at Conferences/Academies (Strategy #2): Most districts also sponsored staff attendance at professional conferences, academies, or other events that offered several days of training on a related topic. For example, many teachers attended national or regional conferences sponsored by professional organizations such as the Reading Council and the National Indian Education Association.

Sponsor formal classes (Strategy #3): Many districts sponsored classes provided by universities, community colleges, or professional trainers. Generally, these classes resulted in college and/or district credits. At Scales School in Tempe, the at-risk program sponsored a "professor-in-residence": a nationally recognized expert on elementary level at-risk students who provided nine days of on-site consultation to the K-3 staff.

Conduct Regularly Scheduled At-Risk Program Meetings (Strategy #4): In a few districts staff development occurred in the context of specially designed program meetings. These meetings typically offered hands-on training in various aspects of program evaluation and implementation, and usually incorporated reviews and discussions of professional literature.

Sponsor School Visitations/Observations (Strategy #5): Several programs sponsored visits by their staff to other schools. These visits allowed staff to observe other programs in operation, so they might acquire new skills and ideas to enhance their own at-risk programs.

PROGRAM EVALUATION ACTIVITIES AND RESULTS

Several frameworks exist for describing K-3 programs. The 42 programs have been classified by region--urban, rural, and reservation--and by phase. Services are offered in unique combinations of strategies and delivery systems, both program-funded and district-sponsored. In sum, K-3 programs are diverse and multi-faceted. Within this context, program evaluation efforts needed to be clearly delineated. Morrison Institute focused on three broad areas of investigation for the purpose of defining "what works": program implementation, program services, and program outcomes. These areas will now be discussed along with the evaluation activities and results applicable to each.

PROGRAM IMPLEMENTATION

A major evaluation effort was directed toward determining not only the extent to which programs were implemented as planned, but also *how* they were implemented and *how well* they were implemented. To this end, comprehensive descriptions were compiled documenting such program aspects as planning efforts, student identification and placement criteria, staffing patterns (including turnover), and communication efforts among and between program staff, other district personnel, parents, and community members. As part of this documentation, each district was asked to submit participation data for students, parents, and staff. All participation data were cross-checked with program descriptions as part of a verification process that program services had indeed been implemented as planned.

Program Participation

Participation data indicate that 1) all 42 sites offered student services, 2) all attempted to improve parent communication and involvement, and 3) all attempted to provide opportunities for staff training and professional development. Participation data, aggregated for all programs and averaged for the year, are presented in Table 3-10. This table shows that nearly 25,000 kindergarten through third grade students were served through one or more services offered by at-risk programs. (Appendix A, Table A-5 shows how many at-risk and not at-risk students were served by district.) Further review of district submitted data shows that a majority of those served (10,703 children) benefitted from the implementation of developmentally appropriate practices in their classrooms, while 305 children were targeted for specialized assessment (see Appendix A, Table A-6).

Table 3-10 also shows the extent of parent services. Written communication efforts reached the most parents (9,214) while formal advisory roles for parents involved the least number of parents (126). On the basis of district feedback, parents reached via written communication generally were those who participated in or were targeted to receive other kinds of services. As a whole, then, one can estimate that at least 9,000 individual parents were "reached" by at-risk program efforts; however, the extent of their actual "involvement" varies by service (see also Appendix A, Table A-7).

Regarding staff services, an estimated 5,482 participants attended workshops and other in-service activities. This number may reflect duplicated numbers, as staff members attending two or more different workshops were counted once for every activity attended. Visiting other schools was the least utilized staff training strategy (see Appendix A, Table A-8).

Table 3-10

K-3 AT-RISK PROGRAM PARTICIPATION DATA FOR FY 1990-91		
Student Services (unduplicated count)		24,738
-- At-risk	18,334	
-- Not At-risk	6,404	
Parent Services (unduplicated count)		
• Increased home/community outreach efforts		
-- written communication		9,214
-- verbal communication		3,583
-- formal home visits		1,704
-- take-home activities		3,020
• School-based involvement		
-- formal parent classroom volunteers		605
-- advisory roles re: at-risk		126
-- events		3,565
• Upgrading parent skills		
-- workshops		2,154
-- formal classes		691
• Counseling/social services		604
Staff Services (*may* include duplicated counts*)		
• Workshops/in-service		5,482
• Conferences/Academies		802
• Formal classes		217
• Formal at-risk program meetings		1,589
• Schools visits/observations		133

* Duplicated counts are a result of the fact that the same staff member may have participated in two or more different kinds of services or activities.

Quality of Implementation

While participation data indicate that services were implemented, they do not reveal how *well* services were implemented. The issue of "quality of implementation" was addressed in several ways. First, at the onset of the 1990-91 school year, program directors were asked to list the aspects of their programs that they felt either contributed to or constituted a barrier to the successful implementation of their programs. This list of successful and unsuccessful practices was included in the *Arizona At-Risk Pilot Project Report for FY 1989-90* and will not be repeated here. The list, however, was used to generate items for inclusion on the FY 1990-91 *K-3 Teacher Survey.*

Fifteen salient items were selected that were noted to either "make or break" a program. Given that these elements were identified by directors at the beginning of the school year, the assumption was made that an end-of-year analysis would be useful in determining how well potential barriers were overcome during FY 1990-91. During spring 1991, survey respondents were asked to rate each item on a 4-point Likert scale. The ratings of these elements are presented in rank order in Table 3-11.

Table 3-11 shows that all mean scores for the 15 factors were generally positive. Looking at the five lowest factors, however, *key program implementation issues focus on: school and community collaboration, communication, the alignment of school and district philosophies toward at-risk students, and staff training through both pre-service and in-service.*

Table 3-11

FACTORS AFFECTING K-3 PROGRAM IMPLEMENTATION (N= 1021)*	
	Very much a contributor to success: 4.0
Staff commitment to working with at-risk students	3.59
Availability of funds/resources earmarked for at-risk	3.22
Staff commitment to working with parents of at-risk students	3.21
On-going dialogue/collegiality among teachers on how to assist at-risk students	3.14
Administrative support for new programs/change	3.14
Strong program leadership	3.09
Program assistance provided by the Arizona Department of Education	3.09
Evaluation assistance provided by Morrison Institute/site evaluators	2.95
Teacher "buy-in" for new programs/change	2.93
Integrated school-district plan for meeting needs of at-risk students	2.92
Quality of in-service w/respect to at-risk issues	2.89
Quality of pre-service w/respect to at-risk issues	2.85
"Alignment" of school-district philosophies toward at-risk students (e.g., testing, curriculum)	2.85
Clear communication to all staff re: program objectives, implementation, and refinements	2.80
School and community collaboration in meeting student/parent needs	2.64
	Very much a barrier to success: 1.0
Scale: 1.0 = Very much a barrier; 2.0 = somewhat a barrier; 3.0 = somewhat a contributor; 4.0 = very much a contributor [NOTE: Teachers were directed to consider characteristics a barrier if they were NOT in place to the extent that they "should" be.]	

These results were further analyzed using chi-square tests of significance by two respondent variables: region and phase. All chi-square tests were significant. Regional results indicate that urban teachers were more satisfied with program implementation than were rural and reservation teachers. Moreover, staff at phase I sites were more highly satisfied with program implementation than were staff at phase II sites. When phase II district-based programs were separated from phase II school-based programs, however, results showed that phase II school-based staff were not only more satisfied with program implementation than their district-based colleagues, but also were more satisfied than respondents from phase I programs. In other words, *program implementation was perceived more positively at sites that did not have to "deal" with a district-level bureaucracy.*

Survey respondents were also given the opportunity to comment on program implementation. Of 1021 respondents, 961 (94 percent) commented on one or more strengths in the areas of: student services (51.4 percent responding), parent services (43.0 percent responding), staff services (42.1 percent responding), and the program in general (30.0 percent responding). Additionally, changes were recommended by 346 respondents (36.0 percent) for student services, 306 (31.8 percent) for parent services, 289 (30.0 percent) for staff services, and 217 (22.6 percent) for the "program in general." Figure 3-1 depicts this analysis.

Figure 3-1

K-3 PROGRAM STRENGTHS AND RECOMMENDED CHANGES

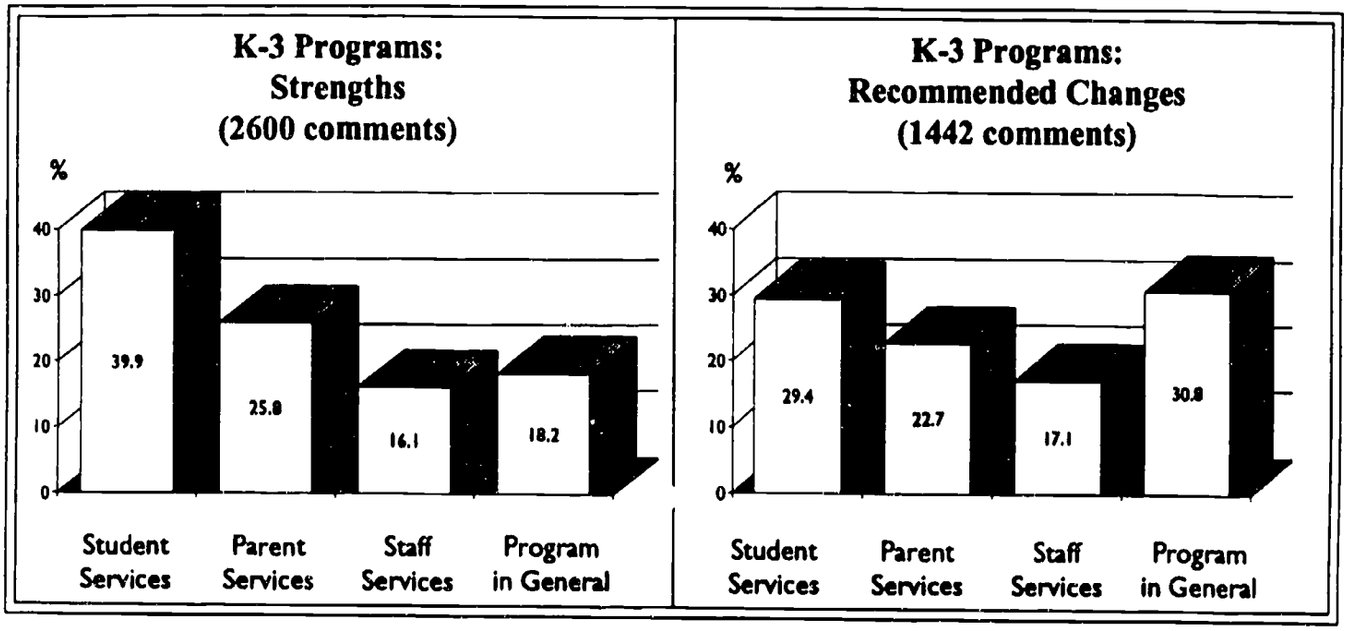
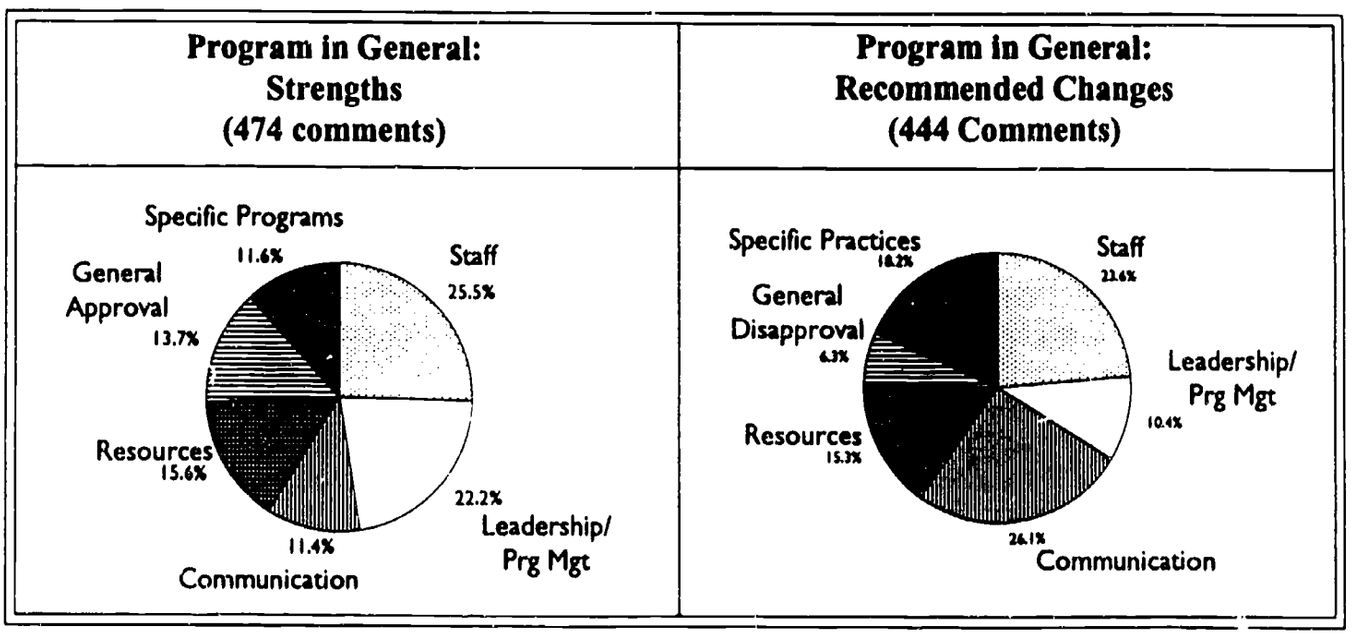


Figure 3-1 indicates that most strengths were noted in student services, whereas most recommendations for change were made for the "program in general." This latter area encompasses issues regarding program implementation. Taking a closer look at the "program in general," Figure 3-2 illustrates both the strengths and recommendations pertaining to program implementation. A majority of program strengths (25.5 percent) were perceived in relation to staff (e.g., their qualifications and/or commitment). Leadership and program management were also noted as implementation strengths.

Figure 3-2

K-3 PROGRAM IMPLEMENTATION STRENGTHS AND RECOMMENDED CHANGES



Of the recommendations made for change, most (26.1 percent of the total comments in this area) reflected a need to improve communication. Additional concerns centered on needs to hire more and more qualified staff, improve specific implementation policies/procedures, and provide additional resources. It should be noted that under "communication" there were a number of comments reflecting teachers' desires to have more input into program planning and implementation. Concerns regarding specific implementation policies/procedures were wide-ranging, but encompassed the need for better integration and coordination of programs within schools, districts, and communities.

Interviews with 422 persons (see Appendix A, Table A-9) included discussions regarding program implementation. Interview responses regarding overall program implementation revealed that many parents and staff had a limited view of the at-risk programs in their districts. One of the few common areas of concern, however, involved ***staff communication and links within schools and districts***. Some staff said that communication had improved only among teachers, but not between teachers and administrators. Still others said that their districts needed better avenues of communication among all staff. Yet, several staff interviewed indicated that overall district communication had improved as a result of the at-risk programs. Group planning efforts had pulled people together.

> • Said one urban teacher: "We are no longer just a staff of individual teachers...there is a feeling of being a group." A reservation teacher added: "There is a team spirit here.... There is a pride in improving the school...We understand what we have to do."

Fewer criticisms were aimed at ***program management*** than in past interviews. Although management issues were still a concern--prompting some staff to call for better administrative support, guidance, and direction--staff in some districts indicated that their programs had clarified goals and improved leadership during the past year. These factors had helped focus their at-risk programs and eliminate confusion and cross-purposes, staff said. Not surprisingly, staff generally perceived that effective programs had good leadership.

Planning issues, however, were still subject to heavy criticism in some districts. Some staff and school board members said their districts did not react to problems until threatened with a crisis. Others were characterized as having no master plan.

> • Said one exasperated reservation teacher: "It's hard to tell if the program is working when it changes every year."

Regarding ***program linkages with communities***, most positive reports came from urban school parents and staff. They said linkages with their communities were improving and new social services were being offered on-site at school campuses. Staff from rural districts, however, often expressed dismay that their districts were too isolated to establish meaningful community links.

Several programs were criticized for ***late implementation and slow progress*** in effecting changes. Also, some staff bridled under forced classroom reforms "from the top" that did not have their input or support, even though these same staff admitted that reforms were needed. The notion of ***systemic reform*** was a common thread throughout the interviews. Although many respondents said that more reform was needed within their districts, several staff and parents indicated that great strides had been made already.

> • Said an urban teacher: "Before we got the at-risk funding, the prospects for this school making improvement were dismal. This grant is the best boost we could have had. We got the training and the materials to implement what we learned." Said a rural teacher:

"Prior to having the project, (this school) was a workbook school. There was very little communication between grade levels. Now...teachers are working together; professionalism has been raised; everyone in K-3 is committed to the success of the project." Said a reservation teacher: "Prior to at-risk funding, we had the attitude that, 'these kids can't fit into the system.' Now we are asking, 'How can we change the system to fit the kids?"

Although, as noted in the interview data, program leadership was not as prominent a theme as it had been in the past, a fair number (10 percent) of recommendations for change had to do with leadership and program management. At least one hypothesis contends that there is a strong link between unstable leadership and poor communication. Anecdotal data indicate that leadership changes often are accompanied by changes in philosophy, staff and school organization, and program implementation. Such changes were *perceived* to adversely affect program communication.

With this in mind, Morrison Institute investigated the extent of administrative staff turnover since the inception of each phase I site (i.e., 1988-89). Only phase I sites were analyzed because more documentation was available on these sites. Table 3-12 depicts the results of this investigation and shows that over twice as many rural and reservation programs have lost their program directors compared to urban programs. Moreover, more school and district administrators (e.g., principals, superintendents) have left reservation schools than rural.

Table 3-12 shows that, overall, there has been greater than a 50 percent turnover in key program staff and/or administration since the beginning of the programs. *High rates of key personnel turnover, regardless of their specific affect on communication, are cause for concern--particularly in the more isolated and rural programs.*

Table 3-12

	K-3 PROGRAMS: ADMINISTRATIVE TURNOVER*	
Programs (by Region)	**At-Risk Project Director**	**Dist/School Administration**
Urban (8 programs)	2 out of 8 25%	4 out of 8 50%
Rural (7 programs)	4 out of 7 57%	4 out of 7 57%
Reservation (7 programs)	4 out of 7 57%	5 out of 7 71%
TOTAL (22 programs)	**10 out of 22 46%**	**13 out of 22 59%**

* Turnover data were extracted from Morrison Institute formative and summative evaluation reports: September 1990; January 1991; and June 1991.

PROGRAM SERVICES

Program services encompassed all those services offered to students, parents, and staff as a result of the at-risk grant. External evaluators documented and observed those services over time. FY 1990-91 evaluation efforts focused on surveys and interviews to determine staff and client perceptions of services.

Student Services

A key question in the evaluation of student services was: Do specific strategies (or methods, or types of services) appear to "work" better than others? To address this question, K-3 teachers were asked to rate specific strategies on a 4-point Likert scale. Teachers were asked whether or not each strategy met the academic and/or social/emotional needs of at-risk students (i.e., should be maintained or discarded).

Recognizing that many K-3 programs integrate services with other existing programs, services were evaluated in the total school context, regardless of whether or not the service was an "official" part of the program[6]. Teacher ratings of services are presented in Table 3-13. On the whole, Table 3-13 shows that hiring additional teachers and implementing full-day kindergartens were strategies that worked "very well," while counseling services were most "in need of refinement."

Analyzed by phase and by region, it was found that phase I staff generally rated student services higher than did phase II staff, and urban staff rated services higher than did their rural and reservation counterparts. And, except for the two most highly rated student services (adding teachers to reduce class size and providing full-day kindergarten), regional staff disagreed over what they considered effective services. For example, urban teachers rated summer services highly, while rural teachers felt that additional materials made a difference, and reservation staff were most enthusiastic about additional aides (see Appendix A, Table A-10).

Table 3-13

K-3 STUDENT SERVICES EVALUATION (N = 1,021)	
Has worked very well (needs to be maintained as is): 4.0	
Additional teacher(s)	3.60
Full-day kindergarten(s)	3.58
Additional aide(s)	3.41
Summe services	3.40
Additional instructional materials (e.g., books, backpacks, etc.)	3.38
Developmentally appropriate practices	3.32
Instructional enrichment activities (e.g., field trips)	3.32
Formal individualized/small group tutoring during school	3.24
Integrated use of computers in curriculum	3.22
Formal before/after school tutoring	3.18
Improved facilities other than classrooms (e.g., labs, libraries)	3.10
Multi-year classroom(s)	3.06
Multi-grade classroom(s)	2.95
Continuous and specialized student assessment techniques (e.g., child study teams)	2.89
More counseling/psychological services	2.64
Has not worked at all (needs total revision): 1.0	
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

[6] Even so, an additional analysis was conducted comparing ratings of services in terms of whether or not they were "official" aspects of the K-3 program. Pilot districts offering district-sponsored services served as a kind of "non-equivalent control group" for pilot districts offering the same service(s) under the auspices of their at-risk program. For example, mean ratings were compared for those districts offering CAI paid for by district funds versus districts offering CAI as part of their at-risk program. The analysis revealed that, in most cases, survey respondents rate at-risk program services equal to or better than district-sponsored services.

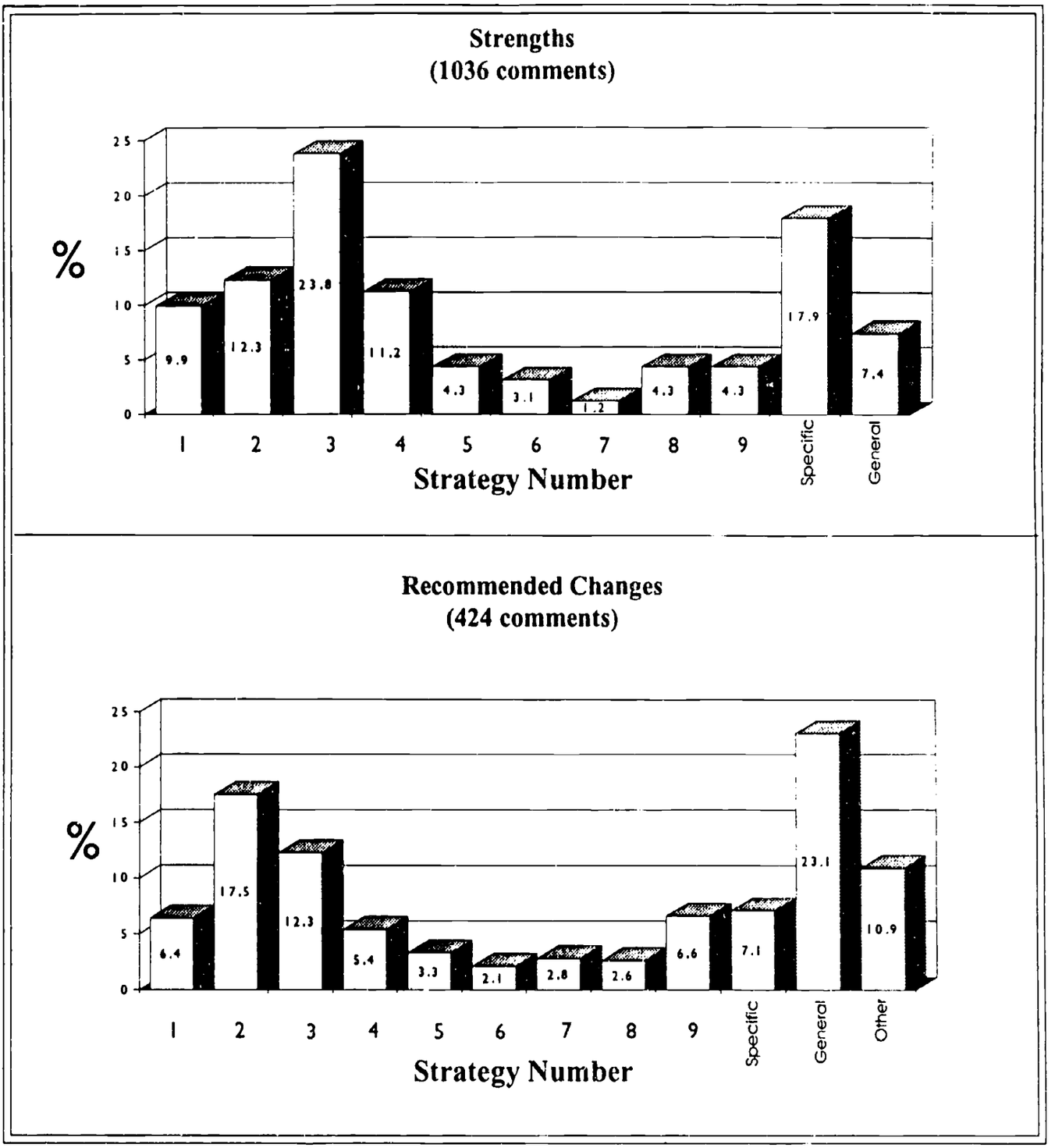
Survey respondents were also given the opportunity to comment on student services in the open-ended questions. As already depicted in Figure 3-1, the majority of teacher comments regarding program strengths were in the area of student services. Furthermore, more than 1,000 separate comments reflected the strengths of student service, while only 424 comments suggested changes. Figure 3-3 represents the breakdown of student service strengths and changes as based on the qualitative analysis of all comments. When possible, comments were categorized around the nine general strategies discussed earlier in this chapter.

Figure 3-3 shows that the majority of perceived strengths were related to altered classroom instruction and/or curriculum modifications (strategy #3). Many comments reflected positively on efforts to incorporate the use of developmentally appropriate practices in classrooms, or applauded specific techniques such as "Math Their Way" and whole-language approaches to instruction. Additional perceived strengths included: district-specific initiatives and programs that may or may not be "official" at-risk program services (e.g., the Welcome Room; ESL program; Chapter I); reduced student-staff ratios (strategy #2, which includes the addition of teachers and aides); strengthened efforts to individualize instruction (strategy #4, which encompasses tutorial programs); and full-day kindergarten programs (included within strategy #1).

Figure 3-3 also shows teacher recommendations for changes in student services. Many comments (23.1 percent of the total) noted general concerns and provided recommendations such as: "maintain services as is," "need more services," and "work with more students." Other recommended changes focused on the need to further reduce student-staff ratios, improve/expand the implementation of developmentally appropriate practices, and/or modify the curriculum. Miscellaneous comments (i.e., "Other") included recommendations such as "give away cafeteria leftovers".

Figure 3-3

K-3 STUDENT SERVICES STRENGTHS AND RECOMMENDED CHANGES



Key:
#1. Alternative Delivery Systems
#2. Staff-Student Ratios
#3. Classroom Instruction/Curriculum Modification
#4. Tutorials
#5. Enrichment Activities
#6. Summer Programs
#7. Improved Facilities
#8. Student Assessment
#9. Counseling/Social Services

Specific (e.g., local district procedures)
General (e.g., "like;" "dislike")
Other = miscellaneous

Student services were also the subject of interviews from which several broad themes emerged regardless of region or focus group. First, respondents praised those school districts that had hired ***additional teachers and aides*** in an effort to reduce class sizes and student/staff ratios. The main benefit of these efforts, parents and staff said, was that students received extra individual attention.

- Regarding one student who had benefitted from extra attention, an urban teacher said: "(Before) they would have just dumped him in a special education class. Nothing was really wrong with him. He just needed time to develop."

Along the same lines, parents and staff often applauded ***tutorial programs*** whether they occurred before, during, or after school.

- Said an urban teacher:"I don't know how we functioned without (the tutors)...it is very difficult to individualize to the extent that some children need, and the in-class tutoring program has made this possible." A reservation teacher echoed these sentiments: "We might be sending non-readers on to third grade if it were not for this one-on-one opportunity." A reservation mother said simply: "My son feels that he is being helped."

Several respondents, however, expressed specific concerns about tutorials. Some feared that after-school tutorials made the school day too long for young learners. Others said that, while they approved of in-school tutorials, in practice the sessions were too short or too infrequent to sustain change.

- Said one reservation teacher: "You can't expect such a brief time to make an impact." Another teacher added: "[A child] needs more than 20 minutes [two days a week]."

Regarding ***developmentally appropriate practices (DAP)*** incorporated into the curricula of many schools, parents and staff generally agreed that they worked. These practices, said parents and staff, had made language arts and math "fun" for children. They had also helped raise students' self-esteem and enthusiasm for school. Among the comments:

- "The holistic curriculum is why my son is in this school," said one urban mother. "The (at-risk program) sneaks learning in with the fun stuff," a rural parent said. "(My daughter) is excited about school," said a reservation father.

But many staff pointed out that a transition to developmentally appropriate practices requires a wealth of new instructional materials. In many cases program funds were allocated to purchase these new materials, prompting one veteran reservation teacher to call it "a dream come true." Nevertheless, staff and parents said that many more new educational materials were needed, especially in rural and reservation schools.

- Lamented one rural teacher: "You can't use whole language without books." A frustrated reservation teacher asked: "How can we do hands-on activities when we don't have materials for the kids?"

A few variations in responses did occur by region. Urban parents and staff, for example, frequently cited ***full-day kindergarten*** as one of the most effective components of an at-risk program with one parent noting it was an "absolute necessity." Rural and reservation respondents, on the other hand, more often praised the effectiveness of ***bilingual staff***--and cited the need to hire more. Reservation staff made the same comments regarding ***K-3 counselors***. The counselors were effective, they said, but more were needed.

Parent Services

Parent services were examined much as were student services. Using a 4-point Likert scale, K-3 teachers rated whether or not specific strategies "worked for involving parents of at-risk students in their child's education." As was done for student services, parent services were evaluated in the total school context, regardless of whether or not the service was an "official" part of the program. Teacher ratings of services are presented in Table 3-14. On the whole, Table 3-14 shows that teachers rated social events as working better than other parent involvement strategies. The ratings of most other strategies cluster together. More counseling/psychological services, however, were again rated as most in need of refinement (cf. student services, Table 3-13). Classroom parent volunteer programs were the second lowest rated strategy.

Table 3-14

K-3 PARENT SERVICES EVALUATION (N = 1,021)	
	Has worked very well (needs to be maintained as is): 4.0
School social events	3.20
More verbal communication between the parent and teacher/school	3.09
Parent workshops	3.05
Structured classes for parents (e.g., GED, ESL)	3.03
Formal home visits	3.02
Take-home activities for parents to work in their homes with their children	2.97
More written material mailed/sent to the home	2.95
Formal advisory roles for parents	2.88
Classroom parent volunteer program(s)	2.69
More counseling/psychological services	2.66
	Has not worked at all (needs total revision): 1.0
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

Analyzed by phase and by region, the data show that phase I district personnel rated parent services higher than did phase II district staff, while rural program staff rated parent services higher than did their urban and reservation counterparts (see Appendix A, Table A-10). All regions shared the perception that school social events were effective in enticing parents to school. Also, urban and rural staff both felt that increased efforts to communicate with parents in person (i.e., verbally) had been effective. Rural staff, more than their colleagues, also supported educating parents by offering classes (e.g., English as a Second Language; G.E.D. classes).

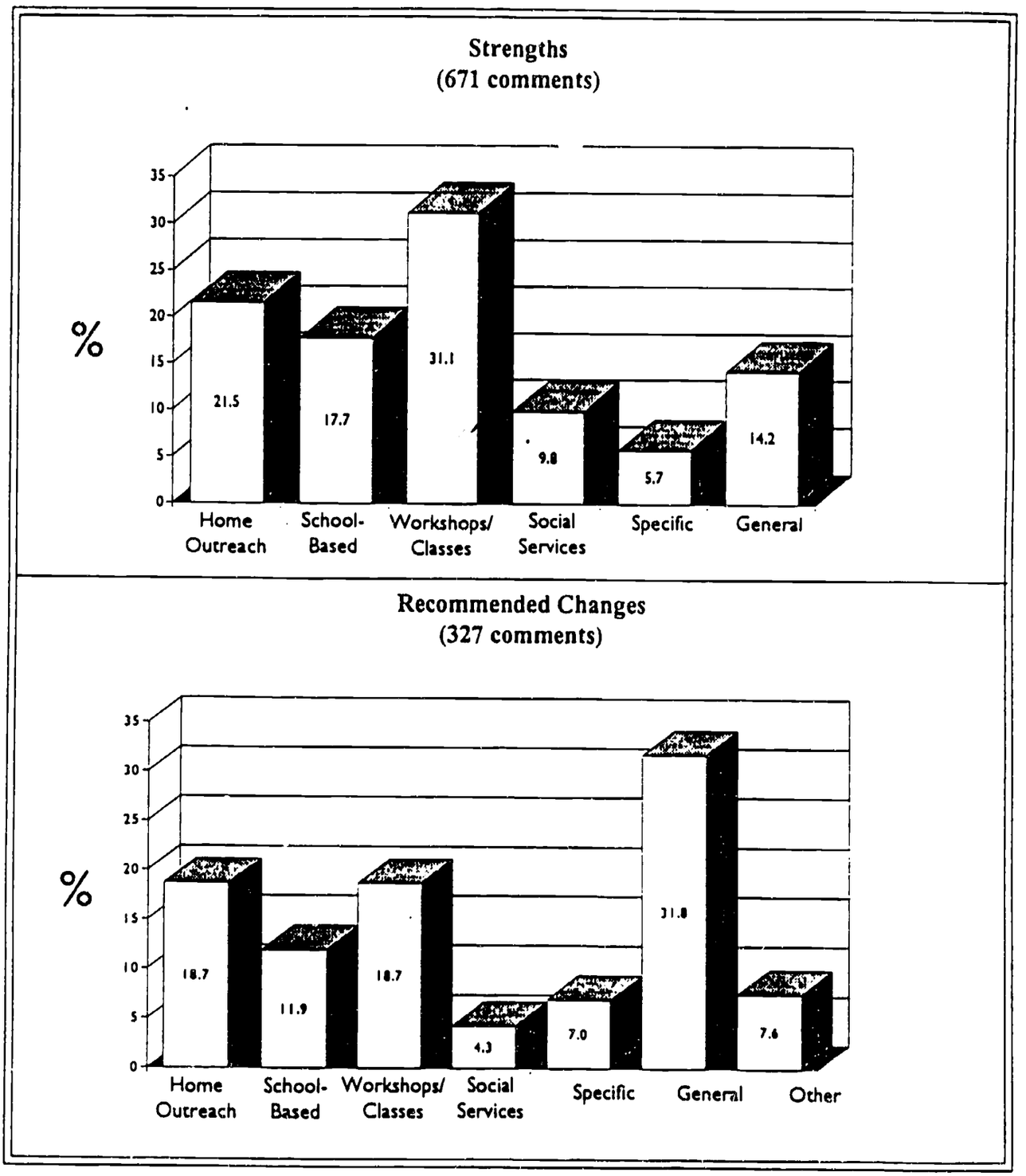
Over twice as many open-ended survey responses addressed parent service strengths than suggested changes (671 comments regarding strengths; 327 comments regarding changes). A majority of positive comments pertained to parent workshops and/or formal classes which survey respondents felt were successful in "reaching" parents (especially hands-on, or "make-and-take," workshops). Additionally, respondents said that increased communication efforts held promise for involving more parents of at-risk youngsters. In particular, person-to-person encounters were cited as more effective than mailed or written communication efforts.

Most recommended changes reflected a general desire for improvement (e.g., need to reach more parents; parents need to be more involved). Many comments mentioned a continuing need to reach

parents through contacts, workshops, and formal classes. Results of the open-ended question analysis regarding parent services strengths and changes are portrayed in Figure 3-4.

Figure 3-4

K-3 PARENT SERVICES STRENGTHS AND RECOMMENDED CHANGES



Specific (e.g., local district procedures)
General (e.g., "like;" "dislike")
Other = miscellaneous

Interviews with parents and staff indicated agreement on many issues pertaining to parent services regardless of region. One of the most frequently made comments was that ***home visits*** by school personnel had increased as a result of at-risk programs. New "parent facilitators" were especially credited with improving school/home contacts, particularly at urban and rural schools.

> • Said one rural parent: "My kids have gone to a lot of schools. There never was any reason to get involved. [But here, the parent facilitator] went from door to door; she kept coming to our house and saying: 'If you care, please come. This will help our kids.'...So now I volunteer."

Parents and staff also agreed that ***other school contacts*** had improved as well. These included notes sent home, telephone calls from teachers, and informal visits made to the school by parents. Nevertheless, many more such contacts were needed, respondents said, and some changes were needed.

> • Said one urban staff member: "You can't send out notices and expect people to come." A rural parent suggested: "The school should try to work more directly with parents rather than using the children as middlemen."

Staff particularly felt that efforts were needed to concentrate on those parents who never had contact with the schools.

> • Observed one urban staff member: "It is still extremely difficult to reach transient parents. They don't have the time and they don't have the energy."

Regarding the results of ***parent training efforts***, parents and staff tended to agree that certain kinds of workshops had worked well. Singled out for praise were "make'n'take" workshops related to educational activities. Some parents, however, suggested more of these workshops be held in their native languages. Special adult GED and ESL classes offered through the schools also received favorable comments.

> • Said one rural teacher: "Most parents starting out in the class have only a second or third grade education. Now they are reading in Spanish and English...These parents are excited about reading with their children."

A rural parent, speaking with the assistance of an interpreter, added: "I want to learn to speak English because my children are speaking better than me."

Parents and staff repeatedly specified two effective strategies for bringing parents to the schools. The first was to invite parents to ***special events***, such as science fairs, which focused on student work. The reason this strategy worked, they said, was simple.

> • Explained one reservation teacher: "Kids' school work is what we all have in common."

The second strategy was to ***ask parents to help chaperon field trips***.

> • One rural parent related how it worked for her: "At first, I went on a field trip. Then I was relaxed around the teachers, so I decided I wanted to help out in the classroom."

Reservation parents and staff also singled out *take-home activities* as effective parent involvement tools. Of particular value were home-based shared reading activities.

- One teacher said: "It's a good form of communication with parents." Another teacher quoted one of her students:"Dad just loves these books!"

Yet, although parent involvement may be increasing in general, staff said that the parents teachers needed to see the most are the hardest to reach.

- A reservation teacher commented: "[I don't] see parents of at-risk kids involved at the school."

Parents and staff cited several barriers to parent involvement. Among those were: language barriers (urban parents), transportation difficulties (urban and reservation parents), lack of importance placed on education (urban, rural, and reservation parents), and lack of time (urban parents).

- Regarding the latter, one urban administrator said: "It is difficult for parents to be involved in school when they are spending their energy trying to survive."

Several parents commented that a "welcoming" atmosphere was essential to encourage parent involvement. Many said their schools were now trying to make them feel more comfortable.

- Said one reservation parent who had earlier had two children retained by her school: "Years ago I felt like I didn't belong here at the school. [Now] I do belong here."

But not all parents agreed on this issue.

- Although a parent at one school in an urban district said, "I have never felt so wanted," parents at another school in the same district commented bitterly: "Some of the teachers don't want us here. Teachers don't think they can learn anything from parents."

Staff Services

Evaluation efforts were directed toward determining staff satisfaction with development and training. Many of the original K-3 program proposals stated that increasing student skills would be accomplished by training staff to work more effectively with students. In lieu of being able to directly determine the "impact" of staff training on student achievement, survey respondents were asked to reflect on what training activities helped staff "to work effectively with at-risk students." Table 3-15 presents the results of this evaluation. It shows that *all* staff training activities included on the survey were rated above a 3.0, indicating that all were perceived as at least "working well." ADE conferences/academies received the highest rating, while regularly scheduled in-services received the lowest.

Table 3-15

K-3 STAFF SERVICES EVALUATION (N = 1,021)	
Has worked very well (needs to be maintained as is): 4.0	
ADE sponsored K-3 conference and/or Academies	3.34
Other conferences/academies	3.30
Formal instruction through a college course or other training class	3.29
Workshops/In-service delivered by outside consultant/trainer	3.21
Regularly scheduled program planning/development meetings (i.e., specific to at-risk)	3.20
Workshops/In-service delivered by district staff	3.16
School/program visits and/or observations outside of own school	3.13
Workshops/In-service provided on a regularly scheduled basis	3.11
Has not worked at all (needs total revision): 1.0	
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

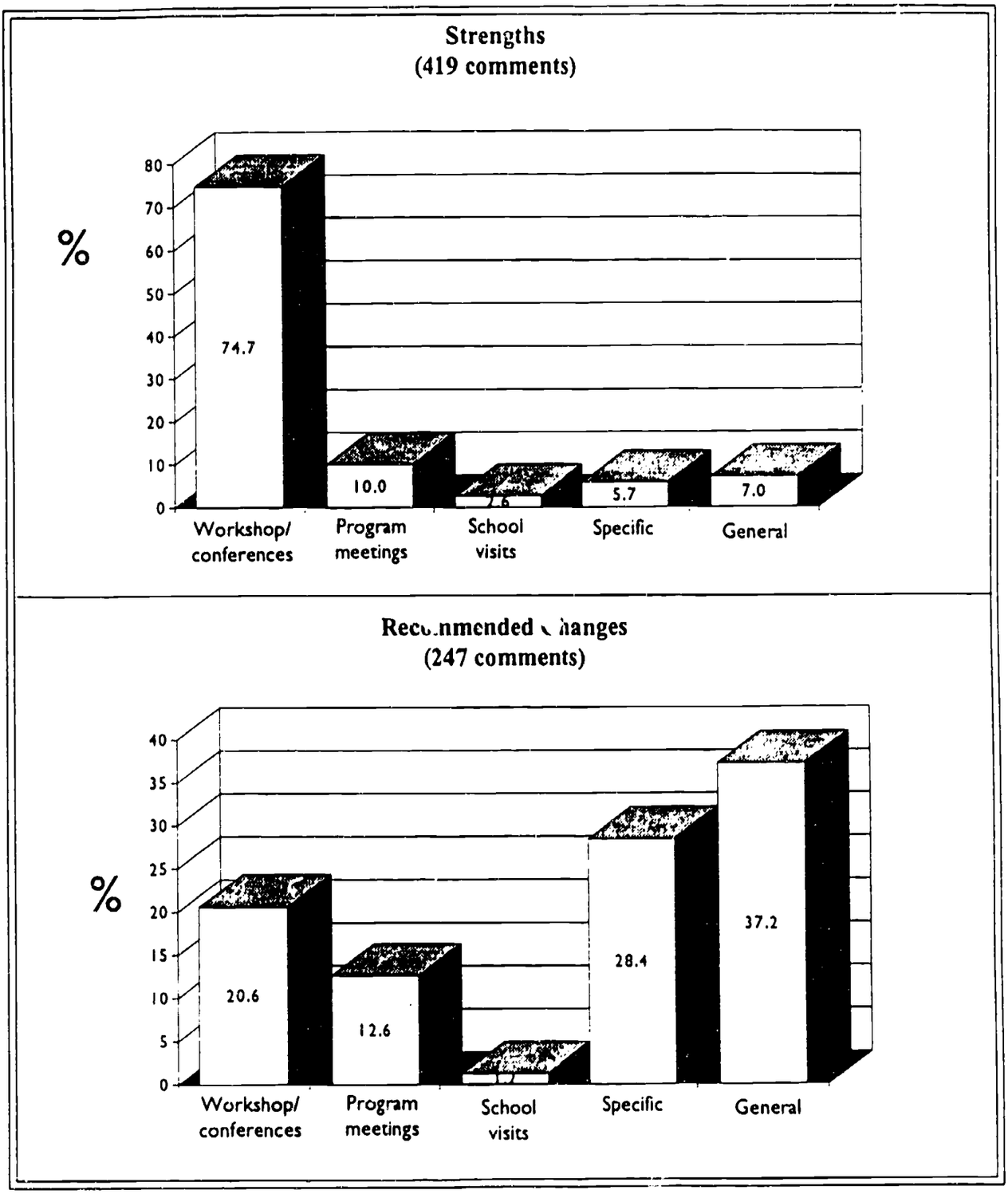
Analyzed by phase and by region, results for staff services parallel those found for student services. Phase I staff rated more services as working very well than did phase II district personnel, and urban staff rated services higher than did their rural and reservation colleagues. Notably, both urban and rural staff rated formal training opportunities (e.g., college classes) most effective, while these were rated lower by reservation staff (who had less access to them). Appendix A, Table A-10 depicts the rank ordering of staff services by region.

Of the 419 open-ended comments regarding staff service strengths, most addressed the general nature of training opportunities such as workshops, conferences, and formal classes. Additionally, respondents felt that regularly scheduled planning meetings were helpful when they provided opportunities for staff to share ideas. Also applauded were specific district policies/procedures, such as providing incentives for attending training opportunities (see Figure 3-5).

Conversely, the majority of changes recommended (37.2 percent of the 247 comments) emphasized the "general" need for additional staff training. Specific recommendations encompassed a diverse range of suggestions including the need for follow-up on in-service, mandatory attendance, non-mandatory attendance, mentoring, better teacher evaluation systems, additional release time, and other incentives to participate in staff development. In the category of "workshops," the need for three general kinds of workshops was mentioned repeatedly: 1) orientation workshops regarding at-risk students and programs; 2) workshops for teachers on how to plan and implement parent involvement programs; and 3) workshops for aides and community members (see Figure 3-5).

Figure 3-5

K-3 STAFF SERVICES STRENGTHS AND RECOMMENDED CHANGES



Specific (e.g., local district procedures)
General (e.g., "like;" "dislike")
Other = miscellaneous

Interview data regarding staff development issues showed few major discrepancies when analyzed across regions. Instead, most perceptual differences in the data could be attributed to variations among school districts. Some placed heavy emphasis on staff development; others did not.

Many staff praised their district's increase in staff development opportunities. Workshops and in-services, they said, provided many new ideas and made them more sensitive to the needs of at-risk students.

> • Said one urban teacher: "What we were doing before was not working. Failure was built in because we weren't addressing the problems of unprepared kids." Another said:"Now we're giving (kids) the freedom to learn from each other and their environment, and they are soaking it up."

The activities that were rated most highly were those in-services that were regular, frequent, and concentrated on implementing new teaching strategies, not just "talking theory." Teacher-led workshops were rated especially high in terms of relevancy and applicability to the classroom.

Training was criticized that was not pertinent to the student population, had no follow-up, or didn't promote classroom application. Also, in some districts, teachers complained that they had been hit with "too much too fast." They said they had been "saturated" with new ideas, yet had been given no time to implement these ideas as classroom strategies. These teachers suggested their districts concentrate on one new strategy at a time, then follow that strategy through to implementation.

Teachers and aides agreed that aides needed more training to develop tutoring skills and understand new curriculum. Unfortunately, they said, aides were often left out of staff development activities. Staff also agreed that some teachers and aides needed training on how to work together effectively. Some aides, they said, were not always used appropriately in the classrooms. Instead of actively tutoring at-risk students, one reservation aide said, they "just do bulletin boards."

At schools where staff development was not a priority, staff often called for more workshops and in-services. Rural and reservation staff particularly favored more workshops held on-site as opposed to holding them in distant cities. These same staff also suggested more observations of other school programs to garner new ideas.

> • As one rural teacher commented: "I don't know what to do. We need new ideas for how to work with at-risk. We need resources."

Many staff said they had the opportunity to travel to off-campus conferences. These conferences were often praised, but some schools were criticized for not taking advantage of the opportunity to follow up on the experience.

> • Said staff at one urban school: "There is a lot of time spent attending conferences, but there is not time to share what I've learned."

Another frequent topic of concern for staff was the relationship between school planning and intra-staff communication. Staff said that regular grade-level meetings, cross-grade team meetings, and scheduled planning time with other teachers promoted staff unity and provided invaluable avenues for communication and sharing.

• Said one reservation teacher about the hidden benefit of a staff meeting convened to discuss selection of classroom materials: "It made us think in bigger terms about the curriculum."

In some districts, staff called for more resource teachers and K-3 specialists to assist teachers. Schools that employed such resource specialists often said communication among staff had improved as a result. In contrast, schools that did not provide either resource teachers or planning opportunities for their teachers were often characterized as having poor lines of communication.

PROGRAM OUTCOMES

K-3 at-risk outcomes were examined in several ways. First, pilot site personnel were asked their perceptions regarding program outcomes. Second, student outcome data--including achievement test scores, absenteeism, and promotion/retention rates--were collected via the cohort study and retention rate survey. Third, efforts were made to collect site-specific outcome data from participating districts through self-reports.

Perceptions of Program Outcomes

Seven program outcomes[7] were included as items to be rated on the *K-3 Teacher Survey*. Two outcomes pertained to student outcomes, one to parent involvement, one to staff development, and three related to "overall program" outcomes. Table 3-16 shows that the mean score of all items was below the score indicating "achieved to a high degree." Two outcomes--improved parent involvement for parents of at-risk students and improving linkages with community-based organizations--were most negatively perceived (falling below a mean score of 2.5).

Table 3-16

K-3 PROGRAM OUTCOMES EVALUATION (N = 1,021)		
Type of Outcome	**Outcome**	**Achieved to a very high degree: 4.0**
Student	Improved academic achievement of at-risk students	2.97
Student	Improved student self-esteem of at-risk students	2.74
Staff	Increased staff skills for working w/at-risk students	2.65
Program in General	Better linkages among school programs	2.62
Program in General	A comprehensive educational program	2.58
Parent	Improved parent involvement for parents of at-risk	2.46
Program in General	Better linkages with community-based organizations	2.30
		1.0: Achieved to a very low degree
Scale: 1.0 = Very low degree; 2.0 = Low degree; 3.0 = High degree; 4.0 = Very high degree		

[7] These seven program outcomes were gleaned from reviews of pilot program proposals and represent commonly shared or globally desirable outcomes for all programs.

These data, analyzed by phase and by region, indicate that phase I staff rated more outcomes as having been achieved to a very high degree than did phase II staff. In accordance with the findings for student and staff services, urban staff rated outcomes higher than did their rural and reservation colleagues. Staff in all three regions, however, rated the student outcomes higher than other outcomes.

Survey respondents also were asked specifically to reflect on the "bottom line" outcome for the at-risk programs as specified by H.B. 2217 (1988), i.e., "...that at-risk pupils *exiting grade three meet the minimum competency requirements* prescribed by the state board." They were asked: "Do you feel that your district/school efforts to help at-risk pupils are, indeed, keeping students "on-track" such that the students *will* exit third grade having mastered competency requirements?" Table 3-17 presents teacher responses by region and phase.

Table 3-17

ARE K-3 STUDENTS "ON-TRACK?" (N = 986)							
REGION	Urban		Rural		Reservation		TOTAL
PHASE	I (n = 257)	II (n = 156)	I (n = 139)	II (n = 134)	I (n = 235)	II (n = 65)	
YES, to a large degree	38%	21%	23%	22%	30%	28%	28%
YES, to some degree	54%	68%	63%	71%	58%	71%	62%
NO	7%	10%	15%	6%	11%	0%	10%
No response	<1%	1%	<1%	1%	1%	1%	<1%

Table 3-17 shows that a majority of respondents said they *do* believe that they are keeping students "on track;" however, there is a diversity of opinion as to the degree to which this is happening. Specific responses reflected this diversity:

- YES, to a large degree:

  "I feel that the students will have a greater language vocabulary--able to communicate more because of the experiences that have become available through summer school, enrichment, take-home packages, and the visiting artists program. Parents are more involved with their child's learning...."

  "The teachers in our school are using a variety of resources and measures to see that students reach their potential."

- YES, to some degree:

  "The district is only beginning to organize a consistent barometer for assessment which determines mastery and promotion."

  "I feel that in most cases our school/district efforts are keeping kids on track. However, the level at which some at-risk pupils enter our classrooms is so far below grade level...."

• NO:

"I feel that many third graders will go on to fourth grade with too low of a reading level...."

"Academic achievements for students have not been adequately supported."

Note that according to Table 3-17, nearly four out of every 10 staff members in urban phase I districts said they felt *strongly* that they were are keeping students on track, while in urban phase II districts, only two out of 10 said the same. Aggregated by region, the data show that urban and reservation staff were generally more positive that they were keeping pupils on-track (31 percent and 29 percent, respectively, strong "YES" responses) than were rural respondents (21 percent strong "YES").

Certainly, a primary goal of the at-risk programs is to keep children "on track;" yet some may interpret this to mean advancing students from grade to grade regardless of their skill levels. With this in mind, Morrison Institute staff asked survey respondents the following question: "Many districts are adopting policies which prevent or discourage students from being retained. This is giving rise to some concern over children being promoted to a higher grade without appropriate skills. Do you feel children are being "socially promoted" in your district/school?" Table 3-18 summarizes the responses to this question by region and by phase.

Table 3-18

"ARE K-3 STUDENTS BEING SOCIALLY PROMOTED?" (N = 986)							
REGION	Urban		Rural		Reservation		TOTAL
PHASE	I (n = 257)	II (n = 156)	I (n = 139)	II (n = 134)	I (n = 235)	II (n = 65)	
YES, to a large degree	15%	25%	16%	13%	18%	14%	17%
YES, to some degree	51%	49%	54%	68%	54%	62%	55%
NO	34%	24%	30%	18%	26%	20%	26%
No response	<1%	2%	0%	1%	2%	4%	2%

Looking at Table 3-18, it is apparent that a majority of respondents in all districts felt that some degree of social promotion exists in their schools/districts. Responses from urban phase I districts were most positive that social promotion was *not* an issue (34 percent "No" responses), while responses from rural phase II districts were least positive (only 18 percent "No" responses). When data are aggregated by region, the results show that 30 percent of urban respondents and 24 percent of both the rural and reservation respondents felt they were *not* socially promoting students. Comments typifying teachers' opinions were as follows:

• YES, to a large degree:

"Students are being promoted and they do not have the skills necessary to perform at the next level."

"Too many children are being promoted for age-grade reasons, but there is no way they can do the work for their age-appropriate classroom."

• YES, to some degree:

"Students who have already been retained even in kindergarten are not allowed to be retained again. I consider this to be 'social promotion.'"

"Many parents refuse to let their children be held back."

• NO:

"We have many remedial programs that help out at-risk students."

"My district does not 'socially promote' students. Each child is carefully evaluated to determine the best placement for the following year. Many factors are considered in this evaluation."

In summary, the *K-3 Teacher Survey* collected respondents' perceptions of program outcomes. Results (Table 3-16) indicate a perception that student outcomes have been achieved, if only moderately. When this result was examined in light of the "bottom line" of these programs--to keep kids on track in mastering skills, survey respondents said they felt they were keeping students on track, at least to some degree (Table 3-17). At the same time, there was substantial concern that children might be advanced to higher grades without appropriate skills (Table 3-18).

Student Mobility: Can programs make a difference if the students don't remain in school?

Teachers expressed one additional concern regarding program and student outcomes: no matter how effective programs were, they could not make a difference if students did not stay in school. Given this concern, Morrison Institute staff investigated mobility within the context of the multi-year data collection effort initiated in FY 1989-90.

An original "cohort" of 3,958 K-3 students was identified in FY 1989-90, and data were retrieved to the degree possible for FY 1988-89. During FY 1990-91, districts continued to track students in this cohort group. Of the original 3,958 students, 251 students (or 6.3 percent) were "lost" between reporting years (i.e., records were missing or unable to be "matched" for FY 1989/90 and FY 90/91). Therefore, complete or partial data were reported for 3,707 students for FY 1990-91. Of these students, 670 either did not reenroll (n=659) or data were not recorded (n=11). Thus, 18.1 percent (n=670) of the students in the original cohort were lost for the study.

Of the 3,037 children who did reenroll, an additional 223 students were lost during the school year, leaving 2,814 pupils from the original cohort (71.1 percent). In sum, *nearly three out of every 10 students (28.9 percent) were unable to be tracked longitudinally.* The greatest attrition occurred between school years, with many children never reenrolling in school. However, school-year "transience" accounted for additional turnover.

Student attrition, or mobility, was also examined by phase and by region. Phase I and II district/school data were virtually identical. Both types of sites lost roughly 18 percent of their students between school years and an additional 8 percent of their students during the FY 1990-91 school year. Regional differences, however, were identified and are presented in Table 3-19.

Table 3-19 indicates that urban/suburban district *summer* attrition rates were highest of the three regions, although rural district rates were only slightly less. School-year attrition rates for urban and rural districts were also roughly equivalent. Total attrition rates (i.e., all students lost from the FY 1990-91

cohort) for urban and rural districts showed that both lost over one-quarter of their student population in a 12-month period. Reservation districts had more stable student populations.

Table 3-19

K-3 STUDENT ATTRITION RATES							
REGION	1990-91 Cohort	Summer Attrition		Reenrolled (1990-91)	School-year attrition		TOTAL ATTRITION	
		#	% of cohort		#	% reenrolled	#	% of cohort
Urban/Suburban	1,370	302	22.0	1,068	87	8.9	389	28.4
Rural	1,368	262	19.2	1,106	103	10.3	365	26.7
Reservation	969	106	11.0	863	33	4.0	139	14.3
TOTAL	3,707	670	18.1	3,037	223	7.3	893	24.1

Individual district data revealed that, for many of them, student attrition rates were even higher than those reported in Table 3-19. Half of the urban districts/schools for which data were longitudinally available (6 of 12 sites) showed attrition rates over 25 percent--two of these were over 50 percent (urban rates ranged from 0 percent to 53 percent). Eight of the 15 rural districts/schools had attrition rates over 25 percent--one over 50 percent (rural rates ranged from a low of 16 percent to a high of 52 percent). Of the 11 reservation sites for which data were available, only one district "lost" 25 percent or more of their students (reservation rates ranged from a low of 4 percent to a high of 48 percent).

Interview and anecdotal data suggest several reasons for high percentages of student attrition. In urban areas, many families moved from one urban district to another due to unemployment or "to keep one step ahead of the law." Among rural populations, migrant labor accounted for some proportion of student mobility. Other contributing causes of mobility and transience, however, remain to be investigated. What is clear is that *teacher concerns regarding student mobility generally appear to be valid.*

Student Outcomes

In order to gauge whether or not programs made a difference in students' academic performance, two primary student outcomes--attendance and achievement--were examined for those K-3 cohort students for whom three years of data were available. A separate study was conducted to investigate student retention among pilot sites.

K-3 Student Attendance: Using the hypothesis that student learning is adversely affected by high rates of absenteeism, evaluators examined variations in student attendance during the program implementation period. In the *Arizona At-Risk Pilot Project FY 1989-90 Project Report* (Bierlein et al., 1990), a two-year trend was reported that reflected significant decreases in absenteeism among pilot program students. This trend continues to be observed in the third year of the project.

As noted in the previous section, 2,814 students from the original cohort group remained at the end of the FY 1990-91 school year. Absenteeism rates[8] across three years for roughly 2,353 of these children (n's vary slightly by year) are depicted in Figure 3-6.

Figure 6 shows absentee rates for the total cohort group and the subgroups of students comprising the cohort. These subgroups are children who have been tracked since FY 1988-89 with one exception: kindergartner students identified in 1989-90 have only been tracked two years (through their 1990-91 first grade year).

Figure 3-6

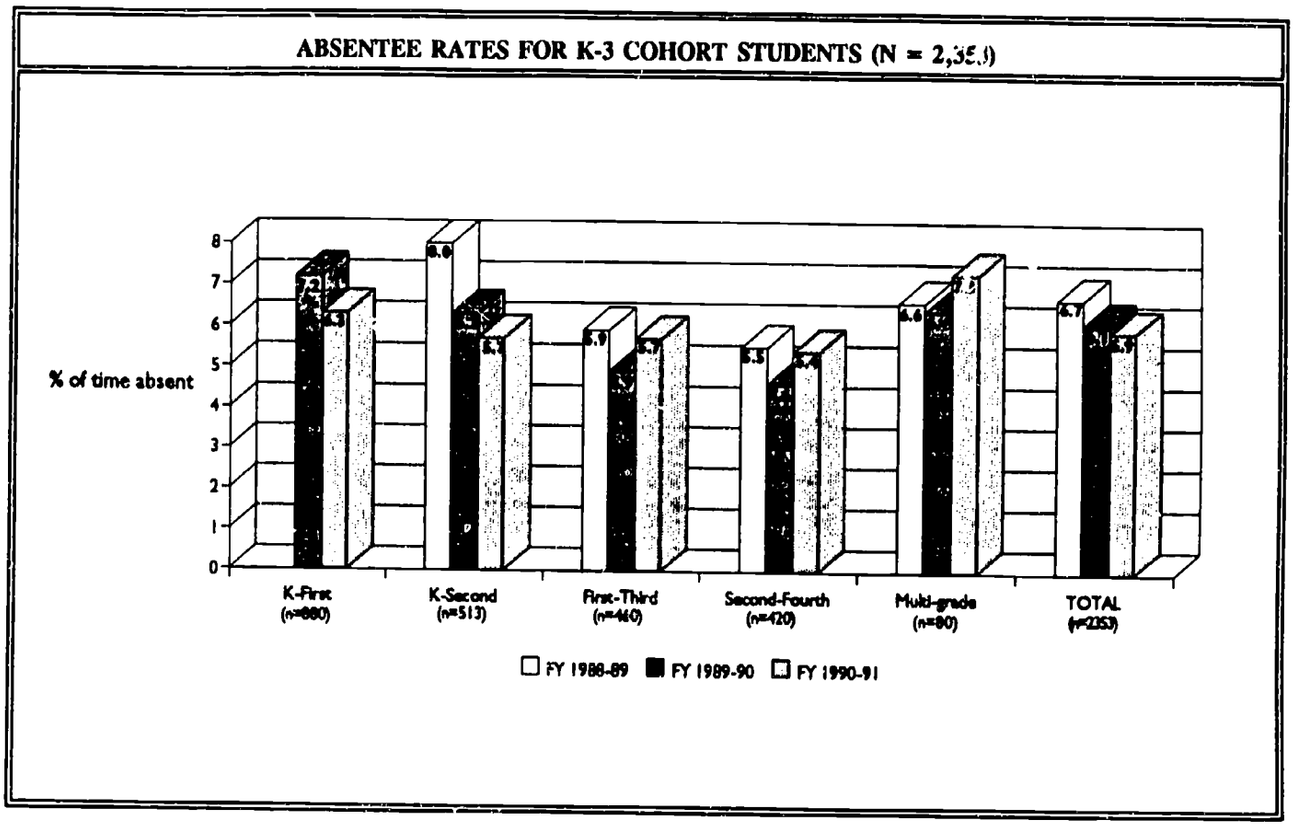


Figure 3-6 shows that *absenteeism rates have declined steadily throughout the implementation period of the at-risk programs* for the total group profiled. Rates for subgroups of children within the cohort (e.g., kindergarten students in FY 1988-89 tracked through second grade) do tend to vary, however.

Data were analyzed by region and phase using subgroups of children representing each region and phase. Table 3-20 summarizes differences in absenteeism by region and phase, and shows that reservation students consistently had the highest absentee rates. Rural programs showed the most consistent trend in decreasing absenteeism. In addition, phase I programs consistently had less absenteeism than phase II districts/schools.

[8] These are calculated by taking the average number of days absent divided by the average number of days enrolled.

Table 3-20

K-3 ABSENTEE RATES BY REGION AND PHASE			
	FY 1988-89	FY 1989-90	FY 1990-91
REGIONAL BREAKDOWN			
• Urban/Suburban	4.4	4.3	5.6
• Rural	5.2	4.9	4.7
• Reservation	6.0	5.2	5.9
PHASE BREAKDOWN			
• Phase I	5.1	4.3	4.6
• Phase II	5.9	5.5	6.1

Reduced absenteeism implies that children received "additional" instructional days. Districts also "increased" instructional time through such strategies as full-day kindergarten, one-on-one tutorial assistance, and summer school. Thus, it may be concluded that *both the quantity and quality of instructional time were addressed by at-risk programs.*

K-3 Student Achievement: ITBS scores for approximately 550 students for whom three years of data were available were examined to discern any changes in test performance over time. *Changes in student performance cannot be attributed solely to participation in an at-risk program*, nevertheless, three-year trends in student achievement were examined using normal curve equivalent (or NCE) scores. The trends found are particularly descriptive when presented by region. Thus, Figure 3-7 on page 49 portrays NCE scores for reading, language, and math subtests of the ITBS, by region and by total.

Figure 3-7 shows that net NCE gains were made in reading and language over the three-year period, while math NCE scores declined. (NCE scores compare a student's gains or losses with the average gains/losses for all students who took the test.) In other words, *reading and language subtests revealed average growth (or more), while the math subtest showed less than average growth.* Further inspection of Figure 3-7 shows that aggregate trends can be misleading. For example, between 1990 and 1991, pupils in all regions showed gains in reading, but actually only urban children made steady growth. Also, most of the overall decline in math scores can be attributed to reservation children who represented nearly half of the children profiled.

One thing is important to remember: *declines in NCE scores do not mean that students made no progress*. In fact, looking at grade equivalent (G.E.) scores, one can see that all students, in all areas, showed steady developmental progress over the three year period. As shown in Figure 3-8 on page 50, grade equivalent scores (shown along the left axis) are contrasted with NCE scores (shown along the right axis). Scores are presented for four subgroups of students tracked between FY 1989 through 1991:

- K 1 = 1990 kindergarten followed through 1991 first grade (n = 10),
- K 1 2 = 1989 kindergarten followed through 1991 second grade (n = 6),
- 1 2 3 = 1989 first grade followed through 1991 third grade (n = 184), and
- 2 3 4 = 1989 second grade followed through 1991 fourth grade (n = 318)[9].

[9] G.E.s are reported only for those children whose NCE scores could be meaningfully interpreted with specific reference to grade level tests and scores; therefore, Figure 3-8 excludes children reported in multi-grade classrooms and does not reflect the "TOTAL" population.

Figure 3-7

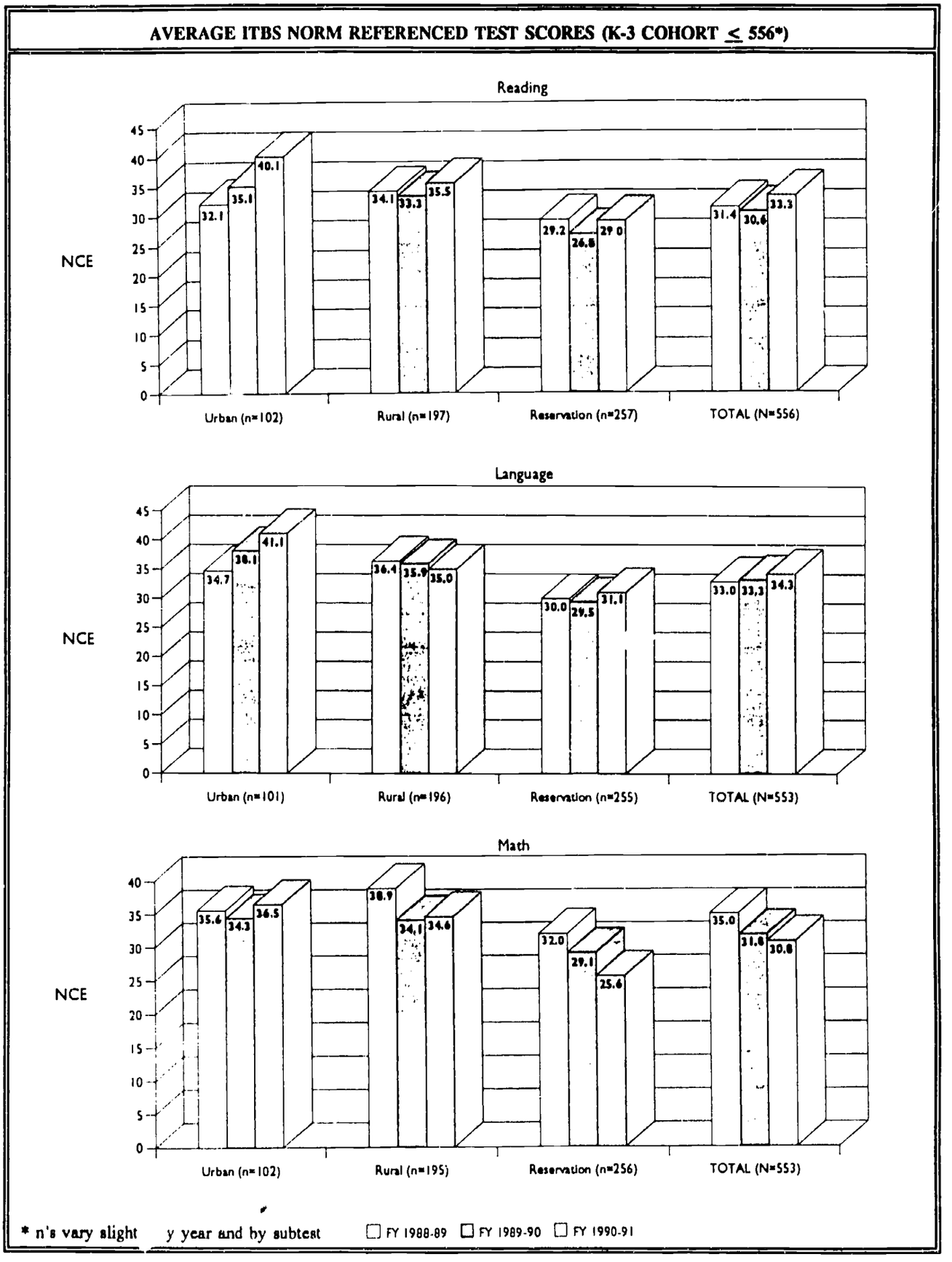
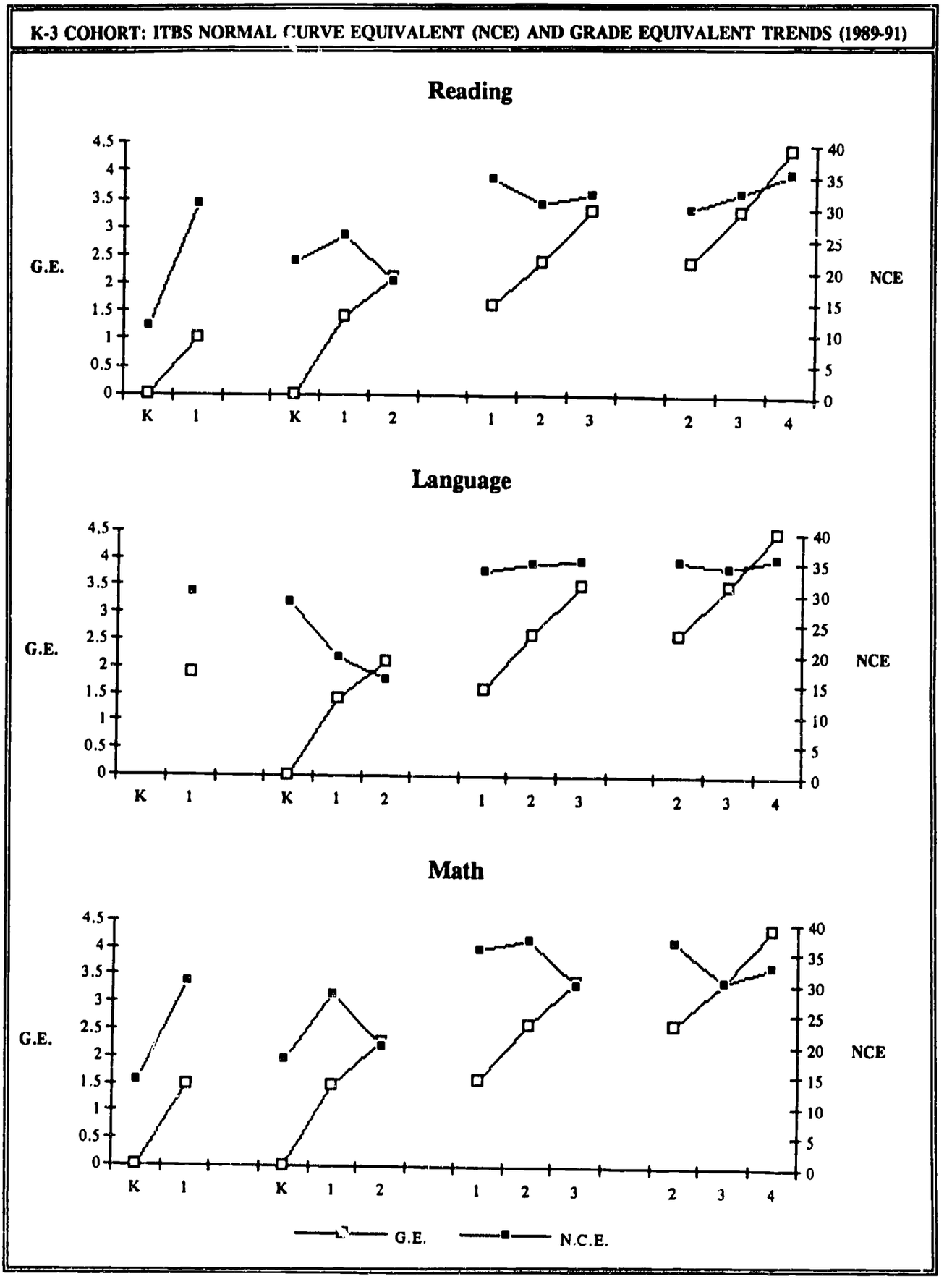

AVERAGE ITBS NORM REFERENCED TEST SCORES (K-3 COHORT ≤ 556*)
Reading
NCE
45
40
35
30
25
20
15
10
5
0
32.1
35.1
40.1
34.1
33.3
35.5
29.2
26.8
29.0
31.4
30.6
33.3
Urban (n=102)
Rural (n=197)
Reservation (n=257)
TOTAL (N=556)
Language
NCE
34.7
38.1
41.1
36.4
35.9
35.0
30.0
29.5
31.1
33.0
33.3
34.3
Urban (n=101)
Rural (n=196)
Reservation (n=255)
TOTAL (N=553)
Math
NCE
40
35
30
25
20
15
10
5
0
35.6
34.3
36.5
38.9
34.1
34.6
32.0
29.1
25.6
35.0
31.6
30.8
Urban (n=102)
Rural (n=195)
Reservation (n=256)
TOTAL (N=553)
* n's vary slight y year and by subtest
FY 1988-89
FY 1989-90
FY 1990-91

Figure 3-8

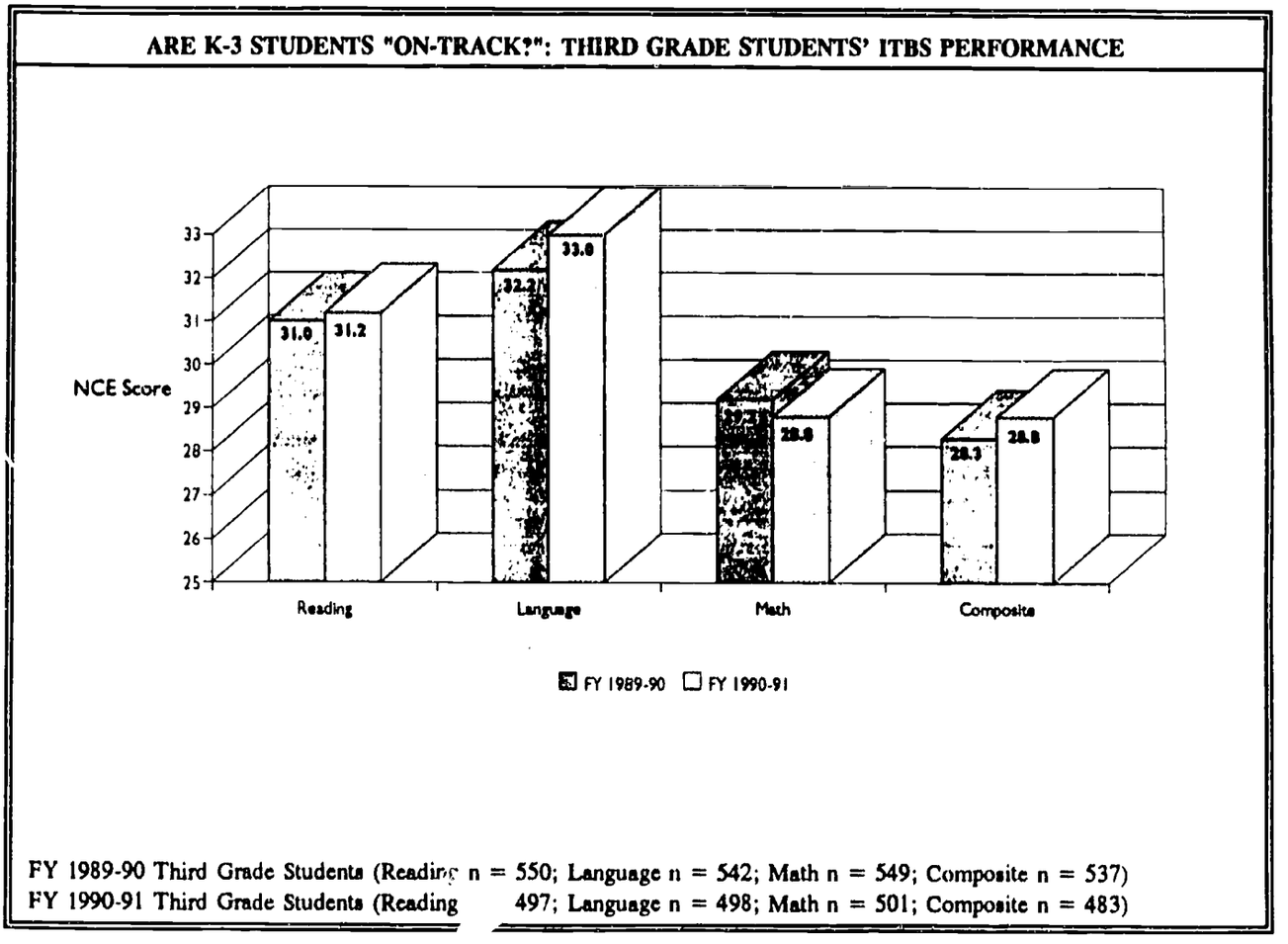

K-3 COHORT: ITBS NORMAL CURVE EQUIVALENT (NCE) AND GRADE EQUIVALENT TRENDS (1989-91)
Reading
G.E.
NCE
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
40
35
30
25
20
15
10
5
0
K 1 K 1 2 1 2 3 2 3 4
Language
G.E.
NCE
Math
G.E.
NCE
G.E.
N.C.E.

One additional observation can be made about the ITBS data presented in Figure 3-8. Although G.E. scores showed consistent developmental progress, it should be noted that a child *exiting* third grade at mid-grade level (e.g., 3.5) would still be perceived as *entering* fourth grade below grade level. Thus, teacher concerns about grade level promotion of at-risk students are supported.

A final analysis of ITBS scores revisits the legislative mandate that "at-risk pupils *exiting grade three meet the minimum competency* requirements prescribed by the state board." Two consecutive sets of ITBS NCE scores (FY 1989-90 and FY 1990-91) for third grade students were compared in this analysis. The hypothesis was that gains in third grade students' scores across consecutive years might reflect changes in the school (e.g., the implementation of at-risk programs). Again, changes cannot be strictly attributed to the implementation of at-risk programs because there are too many other variables which confound the analysis. Nevertheless, Figure 3-9 shows that exiting third grade students in FY 1990-91 were performing higher than their FY 1989-90 counterparts in reading, language, and the composite. Math NCE scores, however, declined.

Although not represented in Figure 3-9, it is once again important to remind readers that scores *do* reflect developmental progress; however, exiting third graders' grade equivalent scores are within third grade ranges. This implies that, as entering fourth graders, they may be considered "behind."

Figure 3-9



With respect to overall ITBS findings, it is encouraging to find increases in reading and language skills. Evidence discussed earlier in this chapter indicates that language proficiency is the key "predictor"

of academic success. It is also the stated emphasis of most programs. While many programs also addressed math skills, the emphasis was on using manipulatives and developing mathematical concepts not easily captured by pencil-and-paper tests. Downward trends in math might be explained by the incompatibility of such curricula with standardized tests. Nevertheless, math programs should be further scrutinized, and educators should verify that math skills have been addressed adequately before children exit third grade.

K-3 Student Promotion/Retention: Repeating a grade, in theory, is supposed to provide a child with a "second chance" to master skills. But recent research (Center for Policy Research, 1990; Shepard & Smith, 1989), discussed in the *Arizona At-Risk Pilot Project FY 1989/90 Project Report* (Bierlein et al., 1990), illustrates that retaining, or "flunking," children is of questionable value: if any gains are made during the repeated year, they are short-lived. Further, it has been found that children who have been retained are more likely to drop out of school later in life than children who have not been retained. Considering both the costs of educating a child for one additional year (or more), and evidence suggesting that retention does not provide long-term benefits, alternatives to retention might be more cost effective.

One hypothesis regarding retention is the following: the greater the use of educational alternatives to providing remediation, the less the need for retention as an educational solution. Knowing that many at-risk pilot sites consciously attempted to use research-based alternatives to retention, Morrison Institute evaluators investigated the incidence of retention at these sites. Findings through FY 1989-90 indeed showed a decline in retention rates during the period of at-risk pilot program implementation (Bierlein et al., 1990).

During FY 1990-91, not only were retention data collected, but evaluators also explored whether or not at-risk programs directly contributed to lower retention rates. This was accomplished, in part, by the administration of a survey on retention (cf. Chapter 2). This survey examined the comparability of district-reported retention data by asking districts for definitions and examples of retention, as well as their criteria for making retention decisions. Responses to these questions were enlightening. *For the most part, pilot districts did not have specific retention policies. Moreover, no standard criteria existed among districts (e.g., a criterion as basic as attendance was not consistent among schools or districts), and much variation existed in the grade levels offered.*

Several findings were of interest. First, almost all districts reported compliance with Arizona Revised Statute 15-701(C) which states: "...a teacher shall determine whether to promote or retain a pupil in grade...." Yet while state policy provides general guidelines, each district has been left to interpret the policy independently. As a result, most districts *do not* have specific policies, but, rather, general procedures (e.g., "When it becomes apparent that a student will have difficulty meeting the promotion standards of the grade level, both the student and the parent should be immediately advised...").

Second, although teacher recommendation was reported as the predominant criterion for retention, relatively few districts specified what criteria teachers used to justify their decisions (e.g., class performance, attendance, mastery of Essential Skills, ITBS scores, social-emotional maturity). For the few districts/schools that *did* offer specific criteria, the number of criteria, and their weight in the decision-making process, varied widely. For example, some districts reported that retention could be considered if a child's attendance was less than 90 percent of the state requirement[10]; others specified 75 percent as their cut-off point.

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[10] Arizona Revised Statute 15-341(A) mandates that pupils shall attend school "for a period of not less than one-hundred seventy days of school or its equivalent...."

Third, and more basic to the difficulties of the analysis, districts *did not* share a common definition of retention. For example, six districts offered transition or developmental grades during FY 1990-91 as part of their at-risk program. Most districts (38 of the 41 districts responding) said they considered a child to be retained if that child repeated the same grade or was placed in a transition classroom. Two of the six districts offering transition or developmental grades, however, said they did not consider placements in these classes as retentions. These two districts did have unique programs[11]; the point is, however, that children who would be considered retained in most other districts were not considered retained in these districts. Given the high mobility rates noted for the at-risk districts, inequity in retention practices could be cause for concern.

The retention survey also addressed the question of whether or not retention policies had changed *since* at-risk program implementation. Responses were analyzed with reference to existing district/school retention policies. In part, Morrison Institute evaluators wished to determine whether or not changes in retention rate were attributable to policy changes stemming from at-risk program implementation.

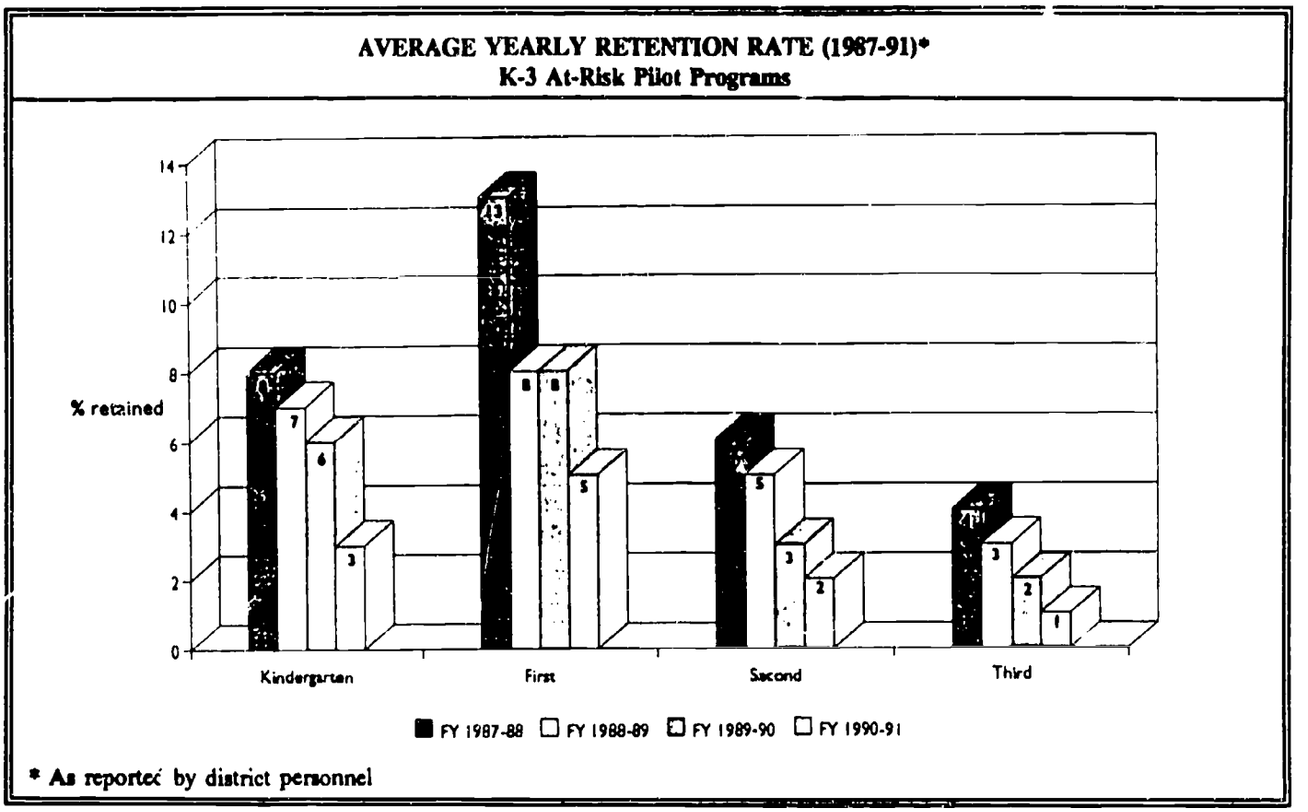
Over half of the 42 pilot sites (23 districts) responded that there *had* been changes since the implementation of the K-3 at-risk program which had affected both policy and practice. Documented policy changes were submitted by two districts. In one, the principal "...mandated that no one be retained..." and in the other a "no retention policy for all kindergarten students..." was implemented. Seven additional districts indicated that, as a result of the implementation of the K-3 at-risk program, they were currently reviewing, evaluating, revising, and adopting retention/promotion guidelines and policies. Also, three schools attributed the decrease or elimination of their developmental and transition grades to the implementation of the at-risk program. Two of these added a full-day kindergarten as an alternative to the (eliminated) transition grade program.

Respondents further noted that at-risk programs had encouraged their districts to explore educational alternatives (e.g., "Schools are now being encouraged to consider the research on retention..."), especially because teachers had become more aware of the research on retention. In order to prevent retention, teachers had sought additional training, employed new teaching methods, expanded remedial programs, attempted to involve more parents, and paid more attention to individual learning and cultural differences.

Have retention rates continued to decrease over time? Figure 3-10 illustrates the average retention rates for grades K-3 over the last four years (1987-88 to 1990-91). As shown, *retention rates have continued to decline. While decreases may not be directly attributable to at-risk programs, evidence from the retention rate survey shows that, in some districts, program implementation was a contributing factor.*

[11] One district offered transition grades between kindergarten and first, first and second, and second and third grades. These were essentially "open-entry, open-exit" classrooms that served children from both the grade before and after, depending on whether a child was advanced for his/her grade or experiencing difficulty. This district considered only the repetition of the same grade as a retention. The other district that did not consider placement in a transition grade as a retention offered a developmental first grade from which students could be promoted to either regular first or second grade.

Figure 3-10



Retention rate data were further examined by region and phase. Additional analyses were made to separate pilot schools from pilot districts. Regional analyses showed that rural districts retained the lowest percentage of students (1.3 percent), while urban districts retained the highest (3.5 percent). Reservation districts' rates were equivalent to the overall average (2.7 percent). Differences were also found between phases, particularly when pilot school data were examined separately from district totals (see Table 3-21).

Table 3-21

FY 1990-91 RETENTION RATES BY PHASE AND DISTRICT/PILOT SITES				
PHASE	I		II	
	Population	% Retained	Population	% Retained
TOTAL DISTRICT	25,614	3.0	21,683	2.3
AT-RISK PILOT SITES *ONLY*	16,953	2.2	8,926	3.7

Table 3-21 shows that, when total district rates were compared, phase II districts had lower retention rates than did phase I districts. But when pilot school sites *only* were separated out and compared, the reverse was true: i.e., phase I school sites had lower retention rates than did phase II school sites. In fact, during FY 1990-91 phase II pilot sites served roughly half as many students as did phase I pilot sites, yet retained students at a rate more than one and one-half times greater.

This *might* be an indication that phase I at-risk programs made a positive impact, particularly considering that phase I at-risk program schools retained proportionally fewer students than did their overall districts (2.2 percent versus 3.0 percent). Certainly, formal changes in districts' retention policies were not an important factor since only two schools reported such changes. Nevertheless, the limitations of the database prevent exact accounting, and this issue warrants further investigation (e.g., to determine if strategies used in the at-risk program schools might be successful alternatives to retention).

District Self-Reported Outcomes: Morrison Institute encouraged all districts to submit self-evaluation data. The following discussion is *not* a comprehensive report on all district self-evaluation efforts. Rather, it illustrates some of the types of self-evaluation being done.

Case Study #1: This rural district was one of the few to attempt a quasi-experimental study of at-risk program results. The district's "official" at-risk program was a K-1 multi-year program which integrated at-risk and non-at-risk youngsters. In the official program, kindergarten (full-day) and first grade classrooms had the assistance of a part-time aide (to reduce the student-staff ratio). Apart from its official program, the district offered four other options for at-risk youngsters: 1) full-day kindergarten with aides, 2) full-day kindergarten without aides, 3) half-day kindergarten with part-time aides, and 4) half-day kindergarten with full-time aides.

At-risk children in all five settings were pre- and post-tested using the Peabody Picture Vocabulary Test (PPVT: English version and Spanish version, when appropriate) as well as the Developmental Test of Visual-Motor Integration (VMI). At-risk students were compared with their non-at-risk peers in all five settings. Some results were inconclusive (i.e., the difference between student growth in classrooms with no aides, part-time aides, and full time aides). However, one finding bears note. *When at-risk program kindergarten students (full day) were compared with non-program at-risk kindergarten students (half-day)--each with part-time aides--program students scored an average of ten months higher on the PPVT, and two months higher on the VMI than did non-program at-risk children. Also, at-risk program participants were only five months lower than their non-at-risk peers at the time of the post-test. In comparison, half-day kindergarten at-risk students were one year-one month lower than their non-at-risk peers. Additional studies are being conducted.*

Case Study #2: This rural district examined the effectiveness of an intensive reading tutorial program. Results were reported for seven at-risk first grade students targeted to receive this service. Based on the results from commercially prepared criterion-referenced mastery and exit level tests and conventional basal testing, five of the seven students were reported to be reading at or above grade level at the end of the year. In addition, one student dropped out of the program, but reportedly improved several levels prior to leaving. The district noted that significant teacher training on tutorial methods was provided in conjunction with the program and, in conclusion wrote:

> *"[The tutorial] is a highly successful component of [the] K-3 At-Risk program. Documented success of students' reading accomplishments, teacher evaluations of students' progress, and parental enthusiasm make the continuance of the [tutorials] an essential attribute of [the district's] program."*

Case Study #3: This urban district placed at-risk students in a full-day kindergarten. Pre- and post-tests were given in three areas: letter identification, writing vocabulary, and sentence dictation. Based on average stanine gains reported in all three areas, the district concluded that:

"The full-day kindergarten program is offering a wonderful opportunity for at-risk children to experience a successful start in school. ...The payoff [is] an academic readiness for grade one."

Case Study #4: This rural district focused specifically on ESL students. The objective: after two years, half of the students who had entered the program with no English proficiency would be operating in English at least 75 percent of the time. Of 16 students identified as ESL in 1989, 11 were assessed at the end of FY 1990-91 using a variety of standardized instruments as well as the judgements of the district's ESL aide and a classroom teacher. The district reported that 91 percent of the children were operating in English at least 75 percent of the time. The district concluded:

"All the students who entered this program are now speaking and communicating in English. These students have increased their self-esteem and their parents are proud of their achievements. The parents feel that [this] is an outstanding school. In fact, these students are now assisting their parents in translation of English into Spanish. One of the greatest strengths of this program has been the ability to pull together the parents and students, increase self-esteem and family pride. It has enabled our LEP and NEP students to keep up with their class/age peers and to be successful in their academic studies."

K-3 PROGRAM EVALUATION CONCLUSIONS

PROGRAM IMPLEMENTATION CONCLUSIONS

A comparison of survey ratings on implementation success/barriers, open-ended comments, and interview data yields several recurrent themes:

- Poor/inadequate communication has adversely affected program implementation; many teachers want to have greater input.

- Coordinating/integrating programs has been problematic; establishing school-community collaboration is an issue to be addressed, particularly in rural and reservation programs.

- Program planning and "alignment" of philosophies appear to be on-going problems that are intertwined with the issue of communication; in particular, many teachers want planning input.

- Qualified and committed staff can either "make or break" a program; in order to produce qualified staff and update existing staff, adequate and appropriate staff training is required.

- Strong program leadership and administrative support are essential for program success.

While this section primarily has highlighted concerns regarding program implementation, it is important to recap the following *positive* findings:

- Programs, in general, have been implemented as planned; they have served over 24,000 students, established communication with over 6,000 parents while offering specific services to many others, and provided staff training for personnel at all 42 program sites.

• Of 15 factors identified as affecting program implementation, *all* were rated more positive than negative by the more than 1,000 teachers/staff responding.

• Open-ended question responses and interview data produced more positive than negative comments regarding program implementation.

PROGRAM SERVICES CONCLUSIONS

Student Services

A comparison of survey ratings on student services, open-ended comments, and interview data yields the following themes:

• Reducing student-staff ratios is considered an effective strategy for working with at-risk children; however, both *more* and *more qualified* staff are needed.

• Full-day kindergarten holds promise for helping at-risk youth.

• Tutorial programs can effectively offer individualized instruction; *how* or *when* tutorial programs should be implemented remains subject to debate.

• Modifying classroom instruction--by using different curriculum materials and different instructional strategies--is well-received; modifications, however, may not be easily implemented without additional and appropriate materials.

Parent Services

A great deal of consensus exists between interview data and staff survey ratings of parent services. Open-ended question responses were not as clearly aligned with these findings, although they support the following conclusions:

• Social events are effective in increasing parent involvement.

• Efforts by staff to communicate *in person* with parents are most effective. That is, *oral* communication (phone calls or home visits) is more effective than *written* communication (notes or materials mailed to the home).

• Parent training opportunities--either through workshops or formal classes--are promising practices for parent involvement.

• Although many perceive an overall increase in parental involvement, desired levels of involvement have not been achieved.

Staff Services

Survey data, open-ended responses, and interview data on staff services provide a clear direction for staff development efforts to take. While staff generally agree that a variety of staff development strategies have worked well, they also identify on-going needs and offer specific ideas regarding what constitutes effective in-service. The following conclusions can be drawn from the data:

- In-services should focus on classroom applications of specific teaching strategies that are relevant to at-risk populations; comprehensive follow-up should be included.

- Teachers should be given time to process new teaching strategies and fully implement them in their classrooms.

- Teachers benefit from communicating with their peers, and this can be achieved through common planning time, grade level meetings, and team meetings.

- Staff in rural and reservation districts need better on-site staff development opportunities.

- Classroom aides need more training on a variety of curriculum and instruction topics.

PROGRAM OUTCOME CONCLUSIONS

A comparison of teacher perceptions of program/student outcomes, student outcome data, and district-reported data, in conjunction with a study on student mobility, indicate the following:

- Teachers perceive, and achievement data confirm, that students are making some developmental progress; however, the extent to which progress is *directly* attributable to at-risk programs cannot be objectively determined.

- Although teachers believe, for the most part, that they are helping children stay "on track," many are also concerned that children advanced from grade-to-grade without appropriate skills.

- Excessive student mobility is a substantial concern for some districts; even the best programs may not be able to make a difference if students do not remain in the program or school.

- A trend toward decreased absenteeism has occurred since the inception of at-risk programs; this implies that children received "additional" instructional days. These additional days, combined with modifications in the *types* of services children receive, mean that at-risk pilot sites addressed both the quantity and quality of instructional time.

- *For the children represented by the K-3 cohort:* 1) ITBS NCE results showed student progress in language and reading--the two areas emphasized within the at-risk programs; at the same time, ITBS NCE scores showed net declines in math; and, 2) ITBS GE scores showed that students were making steady developmental progress from year-to-year, but were still advancing "below grade level."

- *For consecutive groups of third grade children represented by the K-3 cohort,* ITBS NCE results show progress in reading and language, and declines in math.

• Consistent results indicating net gains in reading and language are encouraging, particularly because these skills appear most predictive of academic achievement.

• Consistent results indicating below-average developmental growth in math indicate a need to review math curricula to determine whether math skills are receiving adequate attention, or whether poor ITBS scores are a result of test-curriculum incompatibility.

• Decreased retention rates have been observed in at-risk sites, and there is some evidence that these are associated with at-risk program implementation.

• District-specific outcome data suggest positive impacts from programs and also illustrate the importance of locally-conducted evaluations to portray specific program effectiveness.

Chapter 4

7-12 AT-RISK PROGRAMS: DESCRIPTIONS AND EVALUATION RESULTS

This chapter includes a synthesis of information from each database compiled for the analysis of the 7-12 at-risk programs. Evaluation findings are presented in the first sections of the chapter; conclusions are discussed in the final section.

DESCRIPTION OF THE 7-12 STUDENTS

In order to better assess how well Arizona's at-risk pilot programs are serving at-risk students, Morrison Institute attempted to gain a clearer understanding of these students--their life circumstances and the characteristics that make them at risk. This was accomplished through the administration of the *7-12 Student Profile* (cf. Chapter 2).

7-12 AT-RISK STUDENT AND FAMILY CHARACTERISTICS

A two-year comparison of profile data was conducted to assess annual trends in student-reported information. The comparison of both student and family data yielded a consistent portrait of at-risk youth being served by the 7-12 at-risk pilot programs. For student data, the only noteworthy difference between FY 1989-90 and 1990-91 was in the category of work. Students surveyed in 1990-91 reported that they worked fewer hours than did students in 1989-90.

With the exception of a decrease in the use of the "no response" option, family information was very similar for the two years of the study. A majority of students reported living with both natural parents. Most parents were said to have no more than a high school education. Students both years reported that many mothers were unemployed outside the home and that a majority of fathers worked in "laborer/clerical" occupations.

FY 1990-91 demographic data were disaggregated by region (urban *versus* rural *versus* reservation) and by grade level (7-8 programs *versus* 9-12 programs). Tables 4-1 and 4-2 highlight the regional analysis. Supporting documentation showing detailed breakdowns by grade level and by region are available upon request from the evaluator. Regional findings show that, of the 1,627 students completing the profile, urban students comprised 19 percent, rural students 52 percent, and reservation students 29 percent. Each region was treated independently under the assumption that respondents were representative of students served by pilot programs in each of the regions. Table 4-1 shows that both urban and reservation programs served approximately equal numbers of males as females, while rural programs served twice as many males as females. The age distribution between regions shows that urban and reservation programs encompassed more students in the 11-14 year old age bracket than did rural programs. Regarding "over-age" students (19-or-older bracket), reservation programs served the most, followed by rural programs.

Urban and rural communities served approximately three minority students for every one white student, with Hispanic students the largest minority in both regions. Of the relatively few Black students served by the programs, most were in the urban areas. Data also suggest that minorities in rural areas were more likely than their urban counterparts to maintain use of a native language other than English. As expected, reservation programs served almost exclusively Native American youth (95 percent).

Approximately one-third of reservation students lived in homes in which their native language was the primary language spoken.

Data bear out what was already known about job opportunities for students: more urban students worked for pay than did either rural or reservation students.

Table 4-1

COMPARISON OF 1990-91 7-12 STUDENT CHARACTERISTICS BY REGION
(Total N = 1627: Urban n = 313; Rural n = 841; Reservation n = 473)

Gender	Male	Female	No Response		
Urban	55%	45%	<1%		
Rural	66%	33%	<1%		
Reservation	48%	52%	<1%		
Age Distribution	**11-14**	**15-18**	**≥19**	**No Response**	
Urban	38%	60%	2%	0%	
Rural	26%	68%	6%	<1%	
Reservation	36%	56%	8%	<1%	
Ethnicity	**White**	**Hispanic**	**Native American**	**Black**	**Other/No Response**
Urban	24%	62%	3%	8%	2%
Rural	28%	58%	8%	3%	2%
Reservation	2%	1%	95%	0%	1%
Primary Home Language	**English**	**Spanish**	**Native American Language**	**Other/No Response**	
Urban	67%	31%	0%	2%	
Rural	54%	42%	2%	2%	
Reservation	57%	1%	36%	5%	
Work for Pay	**Don't Work**	**Work ≤20 hours/week**	**Work >20 hours/week**	**No Response**	
Urban	68%	25%	7%	0%	
Rural	72%	16%	12%	<1%	
Reservation	92%	6%	1%	1%	

Table 4-2 shows that urban students' home environments were the least "nuclear family-oriented" of the three regions. Compared with students in other regions, fewer urban students lived with both natural parents, and more lived with stepparents, in single parent homes, or in "other" living arrangements (e.g., with relatives). In all regions, parents were most likely to be in "blue collar" occupations (i.e., laborer/clerical) and to have no more than a high school diploma. About one-third of mothers and one-quarter of fathers did not graduate from high school.

Table 4-2

COMPARISON OF 1990-91 FAMILY PROFILE FOR 7-12 AT-RISK STUDENTS BY REGION
(Total N = 1627: Urban n = 313; Rural n = 841; Reservation n = 473)

Family Structure	Mother/Father	Natural Parent/ Stepparent	Single Parent	Lives Alone	Other/No Response
Urban	43%	17%	25%	3%	12%
Rural	52%	14%	23%	3%	8%
Reservation	53%	12%	22%	4%	7%
Parent Education	**< High School**	**High School**	**Some College**	**College Graduate**	**Don't Know/ No Response**
• Mother					
Urban	32%	29%	16%	9%	14%
Rural	35%	30%	15%	7%	13%
Reservation	30%	30%	16%	12%	12%
• Father					
Urban	23%	26%	12%	13%	26%
Rural	29%	27%	14%	9%	22%
Reservation	27%	24%	18%	11%	20%
Parent Occupation	**Not Employed**	**Laborer/ Clerical**	**Agricultural**	**Professional**	**Don't Know/ No Response**
• Mother					
Urban	31%	32%	2%	21%	14%
Rural	40%	26%	6%	19%	9%
Reservation	49%	25%	2%	13%	11%
• Father					
Urban	13%	42%	4%	17%	24%
Rural	11%	36%	13%	21%	19%
Reservation	19%	49%	3%	10%	19%

Beyond the issue of regional differences, analyses focused on program differences related to grade level[12]. Specifically, analyses compared those programs being implemented in upper elementary or middle schools with those being conducted in high schools. For this analysis, 14 of 55 program components representing seven schools were classified as serving seventh and/or eighth grade students exclusively. Of the seven schools, two were classified as reservation, two as urban, and three as rural. Only one of the urban schools, however, was "inner city" urban--the other represents a suburban community that borders on and serves a rural area. Thus, certain demographic differences were found between 7-8 grade program students and 9-12 grade program students.

[12] This distinction was of particular interest given literature which points to the unique needs of the upper elementary/middle school population and suggests that different types of intervention programs may be of value for these children (e.g., Task Force on Education of Young Adolescents, 1989; Sherman, 1987). It should be noted that 7-8 programs *may* serve some older students: conversely, 9-12 programs operating in unified districts *may* serve some younger students, including a small percentage of students in grades 7-8. Despite some overlap in student age ranges, the primary distinction between components offered at different grades is felt to be valid. Data are included in the separate data supplement document.

Students in the 7-8 programs represented 26 percent of the survey respondents. Compared to the 9-12 programs, 7-8 programs served more females and almost exclusively minorities (93 percent), representative of Hispanic (42 percent) and Native American (45 percent) populations. This latter characteristic results from the locations of the studied 7-8 grade programs, and should not be interpreted as representative of 7-8 grade at-risk students in general.

Many other characteristics of students in the 7-8 programs paralleled those of the 9-12 population. Higher percentages of 7-8 students, however, reported using a language other than English in their homes and, as expected, a lower percentage worked for pay. More 7-8 than 9-12 grade program students also reported that they lived with both natural parents, and that their mothers did not work outside the home.

PATTERNS OF AT-RISK INDICATORS AND ACHIEVEMENT

An additional purpose of the *7-12 Student Profile* was to gather information regarding the at-risk status of students in the pilot programs. First, at-risk indicators were examined with respect to frequency of occurrence. Second, indicators were examined in relation to four academic achievement subgroups, and indicators were identified that distinguished high achievers from low achievers. All analyses were conducted by region, by grade level, and for the total population.

What indicators best describe at-risk pilot project youth?

Examining the data presented in the "TOTAL" column (Table 4-3), at-risk youth may best be described as teens who: 1) feel that work and/or other responsibilities interfere with school, 2) are involved in no extracurricular or community activities, 3) have previously been suspended or expelled from school, 4) have been held back at least once in elementary school, and 5) have parents who do not attend school functions. Table 4-3 also reveals regional variations in top-occurring indicators.

Table 4-3

% 7-12 POPULATION WITH INDICATOR BY REGION							
URBAN (n = 313)		**RURAL (n = 841)**		**RESERVATION (n = 473)**		**TOTAL (n = 1627)**	
Interference w/school	50	Interference w/school	51	No telephone	66	Interference w/school	53
Suspended/expelled	46	No activities	47	Interference w/school	59	No activities	44
Dropout/"kick-out"	42	Held back ≥ 1 grade	42	No activities	41	Suspended/expelled	38
Low par. participation	40	Suspended/expelled	41	Held back ≥ 1 grade	34	Held back ≥ 1 grade	37
Sibling dropout(s)	37	Low par. participation	39	Low par. participation	29	Low par. participation	36
No activities	37	Dropout/"kick-out"	37	Suspended/expelled	28	Dropout/"kick-out"	33
Suicidal ideas/deeds	35	Sibling dropout(s)	29	Suicidal ideas/deeds	27	No telephone	30
Held back ≥ 1 grade	30	Suicidal ideas/deeds	29	Feels unsafe at home	25	Suicidal ideas/deeds	30
Convicted of a crime	29	Convicted of a crime	23	Sibling dropout(s)	24	Sibling dropout(s)	29
Feels unsafe at home	24	Feels unsafe at home	18	Substandard home	23	Feels unsafe at home	21
Skipped school weekly	21	No telephone	17	Dropout/"kick-out"	21	Convicted of a crime	21
Drugs/alcohol weekly	14	Drugs/alcohol weekly	16	Convicted of a crime	10	Skipped school weekly	14
≥ 3 schools in 2 years	12	Skipped school weekly	15	≥ 3 schools in 2 years	10	Drugs/alcohol weekly	13
Has children	12	≥ 3 schools in 2 years	13	Has children	9	≥ 3 schools in 2 years	12
No telephone	11	Low parent support	8	Drugs/alcohol weekly	8	Substandard home	11
Low parent support	8	Has children	7	Skipped school weekly	7	Has children	9
Poor health	7	In U.S. < 3 years	7	Low parent support	5	Low parent support	7
Substandard home	4	Substandard home	7	In U.S. < 3 years	3	In U.S. < 3 years	5
In U.S. < 3 years	3	Poor health	6	Poor health	3	Poor health	5

Comparing regions, Table 4-3 shows that relatively greater numbers of urban youth reported the following indicators: have children, have a sibling who has dropped out of school, have dropped out themselves, indicate poor health, have seriously considered or attempted suicide, skip school, been suspended or expelled, been convicted of a crime, and have parents who are neither supportive of nor involved in their education. Of all three regions, urban youth were characterized by *the most* indicators that affected relatively *more* students.

In comparison, relatively more rural youth reported that they were not involved in any school/community activities, attended school in the United States for three years or less, had enrolled in three or more schools within the last two years, had been retained at least once during their elementary education, and used drugs and/or alcohol on a weekly basis. Finally, relatively more reservation youth said they: feel responsibilities interfere with school work, live in homes that do not have year-round electricity and/or plumbing, do not have telephones, and do not feel safe and/or protected at home.

From these data, a profile of a typical at-risk students in each region can be created. Urban at-risk youth appear to have considerably more behavioral indicators. Reservation students, in contrast, reflect "at-riskness" more on the basis of life circumstances over which they have little control. Rural at-risk students appear to have a combination of both behavioral factors and life circumstances. Such generalizations are presented *not* to create stereotypes, but to prompt discussion of the *unique* aspects of at-risk youth across Arizona. Clearly, different groups of students present different pictures of what it means to be "at-risk."

Grade level analyses suggest that 7-8 grade program students are not as seriously at-risk as their 9-12 counterparts. As evidence, only three of 19 indicators on the survey affected higher percentages of 7-8 students than 9-12 students. *These data imply that "at-riskness" is a developmental phenomenon to some degree, and that early intervention might forestall certain at-risk behaviors.*

How do indicators relate to achievement?

For each of the four academic achievement categories (mostly A's, mostly B's, mostly C's, less than C average), at-risk indicators were ranked in order of frequency (Table 4-4). Looking at the indicators that apply to 25 percent or more of students in each category, *it is clear that as achievement levels drop, the number of indicators rises.* For example, six indicators apply to 25 percent or more of the A students, while seven apply to B students, nine to C students, and 11 to the less than C-average students. In general, this pattern was consistent for regional and grade level analyses as well.

Table 4-4

RANK ORDER OF 7-12 AT-RISK INDICATORS BY ACHIEVEMENT LEVEL (N = 1627)*

Mostly A's (n = 140)		Mostly B's (n = 455)		Mostly C's (n = 620)		Less than a C-average (n = 391)	
	(% of 140)		(% of 455)		(% of 620)		(% of 391)
Interference w/school	53	Interference w/school	51	Interference w/school	54	Interference w/school	55
						No activities	54
						Suspended/Expelled	52
No telephone	37	No activities	39	No activities	45		
Low par. participation	32	No telephone	33	Held back ≥ 1 grade	41	Low par. participation	47
Suicidal ideas/deeds	31	Held back ≥ 1 grade	31	Suspended/Expelled	41	Held back ≥ 1 grade	45
Dropout/"kick-out"	27	Dropout/"kick-out"	29	Low par. participation	34	Dropout/"kick-out"	44
No activities	25	Suspended/Expelled	28	Dropout/"kick-out"	31	Sibling dropout(s)	38
		Suicidal ideas/deeds	27	Sibling dropout(s)	31	Suicidal ideas/deeds	32
				Suicidal ideas/deeds	30	Convicted of a crime	28
Feels unsafe at home	23			No telephone	28	Skipped school weekly	28
Suspended/Expelled	23	Sibling dropout(s)	24			No telephone	27
Held back ≥ 1 grade	19	Feels unsafe at home	21				
Sibling dropout(s)	19	Convicted of a crime	17	Feels unsafe at home	22		
Drugs/alcohol weekly	15	Low par. participation	15	Convicted of a crime	21		
Convicted of a crime	15	Substandard home	12	≥ 3 schools in 2 years	15	Feels unsafe at home	22
Has children	14	≥3 schools in 2 years	11	Skipped school weekly	13	Drugs/alcohol weekly	19
≥ 3 schools in 2 years	11	Drugs/alcohol weekly	11	Drugs/alcohol weekly	13	≥3 schools in 2 years	11
Substandard home	10	Has children	11	Substandard home	12	Low parent support	11
Skipped school weekly	10	Skipped school weekly	6	Has children	9	Substandard home	9
Low parent support	7	Low parent support	6	Low parent support	7	Poor health	9
Poor health	6	In U.S. < 3 years	6	Poor health	6	In U.S. < 3 years	7
In U.S. < 3 years	4	Poor health	4	In U.S. < 3 years	5	Has children	6

Lines divide indicators by quartile (e.g., 0-24%; 25-49%); 27 students are included in the total N who did *not* rate their achievement level

Indicators were next examined to see which, if any, distinguished between high and low achieving at-risk students. Indicators were identified that increased in frequency across categories[13]. These indicators are hypothesized to be more associated with achievement than other indicators more equally distributed across performance categories. The indicators that were identified to be more pervasive among low achievers than high achievers in the total 7-12 population are as follows:

- Student is not involved in any school/community activities
- Student has been held back at least one elementary grade
- Student has sibling(s) who has/have dropped out of school
- Student has previously dropped out of school
- Student has been suspended or expelled from school
- Student has been convicted of a crime

[13] Increases were examined regardless of the degree of increment. The use of this criterion limits the analysis as there are certain indicators that appear to distinguish higher achieving at-risk youth (e.g., A and B students) from lower achieving students and other indicators that may distinguish C or above students from less than C students.

Indicators that distinguished among levels of achievement by region and grade were also identified. Regional results indicated that only one indicator showed a trend for urban students: responsibilities interfered with school. In contrast, four indicators appeared as trends in the rural areas: responsibilities interfered with school, involved in no activities, was suspended or expelled, and had been convicted of a crime. Finally, reservation low achievers appeared more at risk than high achievers with respect to six indicators: involved in no activities, was suspended or expelled, dropped out of school, was held back one grade or more, and had a brother or sister that dropped out of school. For the very few students to whom it applied, recent immigration to the United States was also more prevalent among reservation low achievers than high achievers.

Grade level analyses show that most high and low achieving 9-12 students were equally at risk for a majority of indicators. Only two indicators show a trend across grade performance at the 9-12 level. Low achieving high school students tended to be less involved in activities and to have a sibling who dropped out of school. In contrast, nine indicators emerge as descriptors of performance for 7-8 grade students. Low achieving junior high students were more likely to have been held back at least one grade, to have been involved in no activities, to have parents who participate in few (if any) activities, to feel unsafe at home, to have attempted or seriously considered suicide, to use drugs and/or alcohol on a weekly basis, to have been expelled or suspended, to have previously dropped out of school, and to have been convicted of a crime.

In sum, this analysis reveals that at-risk indicators are distributed across achievement levels among certain pilot program students (e.g., urban students; 9-12 program participants). These students are more uniformly at risk, regardless of achievement. Other groups (e.g., 7-8 grade program participants) demonstrate that as at-risk indicators increase, academic success decreases.

The significance of this analysis is embedded in an hypothesis that indicators with trends across achievement are potentially predictive of academic performance. Given the findings presented, intervention efforts might best be focused on reducing the influence of those at-risk indicators potentially predictive of failure. In other words: an ounce of prevention might be worth a pound of cure.

DESCRIPTION OF THE 7-12 PROGRAMS

Arizona's 7-12 at-risk pilot programs have provided both "preventive" interventions for those students for whom academic failure seemed imminent, and "curative" interventions for those who had already experienced failure. As of FY 1990-91, there were 13 at-risk pilot programs (11 "phase I" and two "phase II") funded at the 7-12 level. One of the programs, however, was a consortium comprised of eight school districts and a county alternative education center. Therefore, 21 individual sites were actually involved in the 7-12 *Arizona At-Risk Pilot Project*. These 21 programs are described in terms of student delivery systems and services provided to students, parents, and staff.

STUDENT DELIVERY SYSTEMS AND SERVICES

In an effort to capture the diversity of the 7-12 at-risk pilot programs, individual programs were classified on the basis of two critical attributes: 1) the degree to which at-risk students were served separately from their non at-risk peers (as a homogeneous group), and 2) the degree to which services supplanted *versus* supplemented "traditional" programs of study. Using these criteria, a continuum of programs/activities emerges. At one end are totally independent and relatively self-contained programs; at the other end are programs completely integrated within the regular school into which at-risk students

are "mainstreamed." Four types of delivery systems along this continuum will now be described (Appendix B; Table B-1 depicts the classification of districts' delivery systems.)

Types of Delivery Systems

Alternative Schools/Programs: Alternative schools/programs generally offer at-risk students an independent program of study in which to earn credits and complete school. Programs have designated staff members, offer a range of academic and vocational course work commensurate with "traditional" school offerings, intensify efforts to provide social services, and generally employ a variety of methods to capitalize upon teaching/learning styles. Programs may have flexible hours, from early morning to late evening, to accommodate students with various scheduling difficulties. For the most part, these programs are located on their own campuses and supplant participation in other school programs.

Ten programs are best described as alternative schools/programs: Apache Junction's Alternative School, the Central Arizona Alternative School, Mammoth/San Manuel's El Camino program, Marana's Alternative School, Nogales' STRIVE program, the Pima County Detention Center School, Sanders Alternative School, Somerton's Alternative School, Superior's Alternative School, and Tucson's PASS program.

Project CAPE, located in the Pima County Juvenile Court Center, represented a unique alternative school model in that detained youth received academic screening and educational services while they were in the detention facility. A transition coordinator served as a liaison with local school districts, juvenile probation, and the Department of Corrections, ensuring that a student's academic status and progress were reported to the appropriate organization when the student left the CAPE program. Dropout retrieval was central to the program--detained youth who dropped out of school were reenrolled through CAPE.

Schools-within-schools (SWS)[14]: The primary characteristic of these programs is that homogeneously grouped at-risk students are served together for a block of time on a regular basis. Like alternative programs, these programs usually employ a greater variety of instructional methods for the purpose of individualizing instruction. These programs may incorporate academic, vocational, and support services, but do so in a more structured manner than do alternative schools. Unlike alternative schools, these programs generally do not offer flexible scheduling and students typically participate in the "regular" school program for at least part of the day.

Nine programs in nine districts are best described as schools-within-schools: Apache Junction's Intervention School, Casa Grande Elementary's alternative program, Coolidge's BEARS program, Creighton's CARE class, Ganado's Applied Technology class, Maricopa's alternative program, Nogales' Middle School alternative program, and Somerton's "Itinerant Program" (two classes).

Classes/Labs/Activities: The primary characteristic of these "programs" (most often viewed as *program components*) is that they are supplemental to the regular school program. At-risk students participate in the regular curriculum for the greater part of the day but receive "extra" or "special" services in a class, on a pull-out basis, after school, or during the summer. Of 35 components in this category, 17 provided additional academic assistance (e.g., tutoring, computer labs, "special" classes),

[14] This category encompasses programs that were classified as both "on-site alternatives" and "special classes" during FY 1989-90. Throughout 1990-91, it has become increasingly apparent that the distinction made last year between on and off-site alternative programs and "special classes" is not a "critical attribute" in distinguishing effectively between delivery systems.

seven are in the area of vocational services (e.g., work experience programs, high tech lab), and 11 were in the area of social/support services (e.g., support groups, clubs, counseling).

School Reform Efforts: Two at-risk sites implemented total school reform efforts. In this case, there were not "programs" designed to serve at-risk students, but rather school improvement efforts targeting *all* students equally. Kayenta implemented a four-period day; Casa Grande Union High School initiated major staff development efforts. Both of these districts, however, also maintained certain classes/labs/activities more suited to the needs of at-risk students.

* * * * *

The distribution of these delivery systems across regions is depicted in Table 4-5. This table shows that urban districts, for the most part, implemented discrete program components under the auspices of their at-risk grants. Notably, urban districts offered the most social/support components of all regions. Rural districts, in contrast, offered more "holistic" interventions (i.e., alternative schools and schools-within-schools) which integrated academic, vocational, and support services. Reservation districts tried a variety of interventions, but primarily offered discrete program components. Notably, they are offering the most components focused on vocational activities.

Table 4-5

TYPES OF 7-12 DELIVERY SYSTEMS BY REGION

REGION	Alternative School/ Program	School Within School	Academic Class/Lab/ Activity	Vocational Class/Lab/ Activity	Support Class/Lab/ Activity	School-wide Reform*	Total # of Programs/ Components
Urban/ Suburban	2**	1	7	2	6	-	18
Rural	7	7	7	1	1	-	23
Reservation	1	1	3	4	4	1	14
Total # Delivery Systems	10	9	17	7	11	1	55

* Only one of two school-wide reform efforts is presented on this table (Kayenta's "Four-Period Day") because only these students were specifically surveyed regarding this effort.

** One of these programs is the Pima County Detention Center, which has been excluded from some analyses presented in subsequent sections of this chapter.

Types of Student Services

Each of the programs summarized above was developed in response to the requirement set forth by H.B. 2217 (1988) that required districts to:

> "... establish a demonstration education and training program that specifically addresses the needs of the secondary at-risk pupil *through alternative programs and activities* that provide *academic and vocational training as well as support services* for dropouts and potential dropouts."

As should be clear, some districts developed alternative programs that integrated and directly delivered academic, vocational, and support services; other districts built a "program" around one activity-- either academic *or* vocational *or* support. Thus, in keeping with the specifications of H.B. 2217 (1988), a variety of *alternative programs and activities* were, indeed, implemented under the auspices of the at-risk demonstration projects.

A question remains. What types of academic, vocational, and support services have been provided? As described in detail in the *Arizona At-Risk Project FY 1989-90 Project Report* (Bierlein et al., 1990, pp. 60-61) and outlined above, each program attempted to integrate academic, vocational, and support services in unique combinations. For purposes of program evaluation, however, frequently occurring types of services in each area were identified as follows:

Academic/ Instructional Services:
- Small group instruction
- One-on-one tutoring
- Computer-assisted instruction (CAI)
- Self-paced curriculum

Vocational Services:
- Applied academics
- Employability skills
- Career awareness activities
- Vocational/occupational training
- Work experience/Entrepreneurial activities
- Vocational assessments/Individual Vocational Education Plans
- High Tech labs

Social/Support Services:
- Life/study skills classes
- Personal counseling (individual, group, family)
- Formal student monitoring
- Formal student mentoring
- Social service linkages/referrals

Essentially, these services can be viewed as a menu from which districts selected services to incorporate within their programs[15].

PARENT SERVICES

Concurrently with H.B. 2217 (1988), State Board criteria for 7-12 at-risk pilot programs required "parental communication" in conjunction with direct student services. During FY 1989-90, four major strategies were identified as used by districts to involve parents. These same strategies were employed during FY 1990-91 and included the following: 1) increasing home/community outreach efforts through oral and/or written communication and formal home visits; 2) increasing opportunities for school-based involvement focusing on school events to which parents are invited; 3) upgrading parent skills through workshops and/or classes; and 4) providing counseling/social services through which parents are served and/or referred to social service agencies for help with family problems.

[15] Note, however, that this list did not exist as such when programs began.

STAFF SERVICES

Although staff development was not an area of emphasis for 7-12 at-risk programs, many districts provided some staff development activities in support of their programs. Additional training was provided through: 1) workshops/in-service, 2) conferences and academies, 3) formal classes, 4) formal program meetings, and/or 5) school visits and observations.

INTEGRATION OF SCHOOL AND COMMUNITY SERVICES

To the degree possible, 7-12 at-risk pilot programs were encouraged to coordinate services with other programs and local agencies. State Board criteria included written agreements between schools and cooperating agencies. Since FY 1989-90, inter-agency collaboration has been reported and verified between programs and the following: chambers of commerce, Indian tribal agencies and organizations (e.g., chapter houses), civic organizations, local businesses, local and county government agencies, private and public health care agencies, juvenile justice systems, community and family resource centers, vocational programs, community colleges and universities, day care centers, mental health organizations and providers, law enforcement agencies, and private counselors.

PROGRAM EVALUATION ACTIVITIES AND RESULTS

It should be clear that there are several frameworks within which to describe 7-12 programs. As of FY 1990-91, 13 pilot programs encompassed 21 sites and at least 55 program "components," of which 14 specifically targeted 7-8 grade students. Programs have been classified by region--urban, rural, and reservation--and by type of service delivery. Three kinds of services--academic, vocational, and support--were offered in unique combinations. While some programs directly incorporated all three service areas in one or more components, others sought to meet student needs through referrals and linkages with other school, district, and/or community-based programs. In sum, 7-12 programs have been diverse and multi-faceted.

Within this context, program evaluation efforts need to be clearly delineated. First, Morrison Institute has focused on examining what constitutes "effective" program implementation. Second, both student delivery systems and discrete services (i.e., academic, vocational, and support) have been scrutinized, as have parent and staff services. Third, program outcomes have been analyzed. All three contribute to an understanding of "what works" for at-risk 7-12 students.

PROGRAM IMPLEMENTATION

Evaluation efforts were aimed at determining not only the extent to which programs were implemented as planned, but *how* and *how well* they were implemented. To this end, comprehensive descriptions were compiled documenting program aspects such as planning efforts, student identification and placement criteria, staffing patterns (including turnover), and communication efforts among and between program staff and others, including school and district personnel, parents, and community members.

Program Participation

Each program was asked to submit participation data for students, parents, and staff. Furthermore, districts were asked to report formal at-risk program linkages by agency and type of service

(e.g., academic, vocational or social/support), as well as the numbers of students served through these linkages. All participation data were cross-checked with program descriptions as part of a process to verify that program services had indeed been implemented as planned. Participation data indicate that all 21 sites offered student services. All sites also attempted to improve parent communication and involvement, and provide opportunities for staff training and professional development. Participation data, aggregated for all programs and averaged for the year are presented in Table 4-6 (see also Appendix B, Tables B-2 through B-7).

Table 4-6

7-12 AT-RISK PROGRAM PARTICIPATION DATA FOR FY 1990-91*

Student Services	
• Students served by at-risk programs (unduplicated estimate)	9,385
• Students served through formal program linkages (*may* include duplicated counts)	
-- Through 22 academic/instructional linkages (e.g., community colleges)	815
-- Through 43 vocational linkages (e.g., JTPA)	1,116
-- Through 79 social service linkages (e.g., counseling, DES)	3,055
Parent Services (unduplicated estimates)	
• Increased home/community outreach efforts	
– written communication	1,532
-- verbal communication	731
-- formal home visits	371
• School-based involvement (i.e., events)	1,183
• Upgrading parent skills (i.e., workshops/classes)	288
• Counseling/social services	182
Staff Services (*may* include duplicated counts)	
• Workshops/in-service	1,068
• Conferences/Academies	166
• Formal classes	166
• Formal at-risk program meetings	392
• Schools visits/observations	23

*Duplicated counts are a result of the fact that the same student or staff member may have participated in two or more significantly different kinds of services or activities[16].

[16] Whenever possible, numbers reported are estimated unduplicated counts. The student number requires some explanation. An average of 7,792 students were served each semester by one or more of the 55 program components encompassed by the *7-12 At-Risk Project*. Some students served in spring semester, however, were also fall semester participants. Accounting for these "carry-over" students, the unduplicated estimate of 9,385 is calculated as follows based on the data reported in Table B-2:

a. Fall semester # served - # leaving = students remaining in the program (7722 - 1524 = 6198)
b. Spring semester # served - fall students remaining = "new" spring students (7861 - 6198 = 1663)
c. Fall semester # served + "new" spring students = total students served (unduplicated estimate: 7722 + 1663 = 9385)

Quality of Implementation

While data indicate that services were implemented, they do not reveal *how well* services were implemented. This latter issue, "quality of implementation," was addressed in several ways. At the onset of the 1990-91 school year, program directors were asked to list the aspects of their programs that they felt either contributed or constituted a barrier to the successful implementation of their programs. This list of successful and unsuccessful practices was included in the *Arizona At-Risk Pilot Project Report for FY 1989-90* (Bierlein et. al., 1990) and will not be repeated here. The list, however, was used to generate items for inclusion on the FY 1990-91 *7-12 Teacher Survey*.

Fifteen salient items were identified by program directors as elements that could either "make or break" a program. An assumption was made that an end-of-year analysis of ratings would be useful in determining the extent to which potential barriers to success had been overcome during FY 1990-91. During spring 1991, survey respondents were asked to rate each of the 15 items on a 4-point Likert scale. The ratings of these elements are presented in rank order in Table 4-7.

Table 4-7 indicates six key program implementation issues that continue to be perceived as barriers: school-district philosophies toward at-risk students, funding, school and community collaboration, pre-service and in-service staff training, and communication.

Table 4-7

FACTORS AFFECTING 7-12 PROGRAM IMPLEMENTATION (N= 982)*	
	Very much a contributor to success: 4.0
Staff commitment to working with at-risk students	3.08
Administrative support for new programs/change	2.93
Evaluation assistance provided by Morrison Institute/site evaluators	2.77
Strong program leadership	2.73
Program assistance provided by the Arizona Department of Education	2.70
Staff commitment to working with parents of at-risk students	2.68
Teacher "buy-in" for new programs/change	2.55
On-going dialogue/collegiality among teachers on how to assist at-risk students	2.55
Integrated school-district plan for meeting needs of at-risk students	2.54
"Alignment" of school-district philosophies toward at-risk students (e.g., testing, curriculum)	2.50
Availability of funds/resources earmarked for at-risk	2.48
School and community collaboration in meeting student/parent needs	2.30
Quality of in-service w/respect to at-risk issues	2.29
Quality of pre-service w/respect to at-risk issues	2.28
Clear communication to all staff re: program objectives, implementation, and refinements	2.27
	Very much a barrier to success: 1.0

Scale: 1.0 = Very much a barrier; 2.0 = somewhat a barrier; 3.0 = somewhat a contributor; 4.0 = very much a contributor. [NOTE: Teachers were directed to consider characteristics a barrier if they were NOT in place to the extent that they "should" be.]

These results were further analyzed using chi-square tests of significance to compare respondents by four variables: region, role, grade level affiliation, and level of program awareness. All chi-square tests were significant. Regional results show that rural teachers were more positive than expected (given expected frequencies defined by the chi-square tests). In comparison, urban and reservation teacher

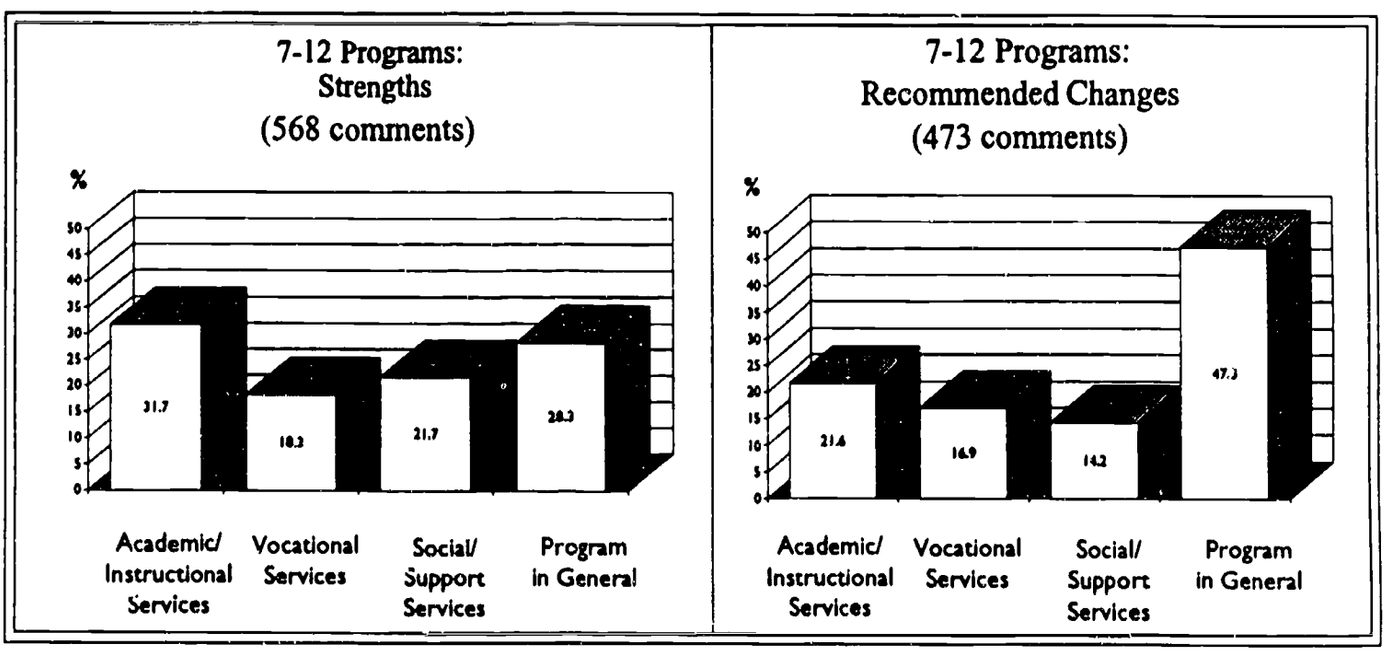
responses were more negative than expected. This suggests that urban and reservation respondents were less satisfied with program implementation than rural teachers.

Results analyzed according to the respondent's role in the district/school show that administrators were more positive than their teaching/specialist staff. In the latter category, vocational educators were the only group to be more positive than expected. In terms of grade level affiliation (grades 7-8 only, 9-12 only, or both 7-12), the relatively few 7-12 respondents--and these *might* include more administrators--were consistently more positive than their 7-8 colleagues who, in turn, were more positive than their 9-12 colleagues. It might be inferred, therefore, that academic instructors and 9-12 grade respondents were less satisfied with program implementation than their colleagues. Finally, results by level of program awareness (i.e., program staff versus "aware" and "unaware" non-program staff) indicate a continuum of responses that ranges from program staff (most positive) to unaware non-program staff (least positive).

Survey respondents were also given the opportunity to make open-ended comments on program implementation. Of 980 respondents, 45 percent remarked on one or more program strengths in the areas of academic/instructional services, vocational services, social/support services, and the program in general (the latter encompassing parent and staff services and program implementation issues). An additional 43 percent recommended changes in one or more areas. Figure 4-1 indicates that of the 568 comments made regarding program strengths, most pertained to academic/instructional services, whereas most changes/recommendations were made for the "program in general."

Figure 4-1

7-12 PROGRAM STRENGTHS AND RECOMMENDED CHANGES

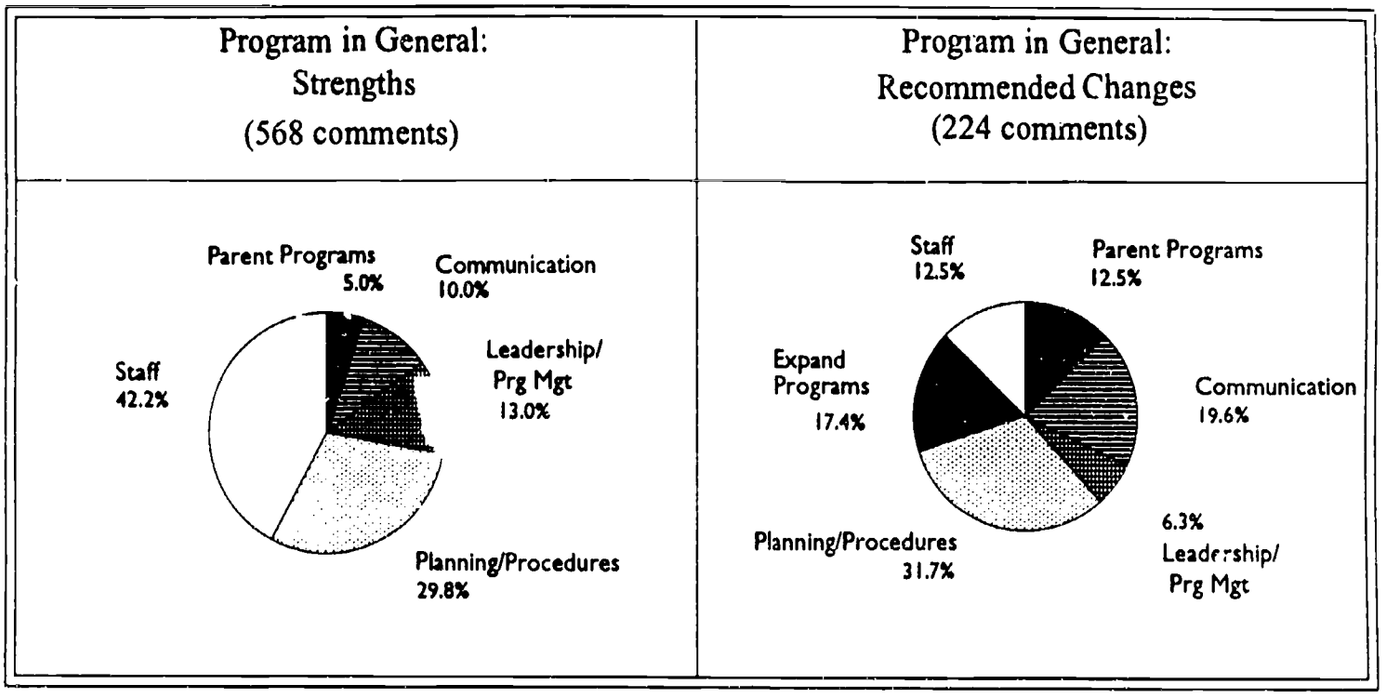


Taking a closer look at the "program in general," Figure 4-2 illustrates both the strengths and recommended changes made in this area. Strengths most often were reported in relation to staff (42.2 percent of all comments made). Comments primarily focused on the qualifications and/or commitment of staff. Specific implementation policies and/or procedures were also felt to be strengths (29.8 percent of all comments). Such things as good planning and coordination of services were noted, particularly in relation to producing student outcomes (e.g., "helps kids feel better about themselves").

Of the comments made under "recommended changes," 17.4 percent actually reflected positive attitudes toward programs, expressing needs to expand them and/or hire additional staff. Otherwise, 82.6 percent of the comments focused on concerns. Major areas of concern regarded specific procedures and communication. Procedures needing improvement included student identification and placement techniques, funding mechanisms, and the coordination and integration of services within districts and the community. Concerns regarding communication were diverse but included: poor communication due to misaligned philosophies; poor "PR" by program staff on available services; inadequate sharing of information between program and non-program staff, including district office personnel and school boards who--according to several respondents--did not always have access to "appropriate" information.

Figure 4-2

7-12 PROGRAM IMPLEMENTATION STRENGTHS AND RECOMMENDED CHANGES



In addition to survey data, interviews with 326 persons (see Appendix B, Table B-9) also touched on program implementation. Parallel to the diversity observed in the open-ended comments, responses were mixed regarding the effectiveness of overall program implementation. This finding reflects the diversity of the school districts involved.

Most respondents presented an overall sense that their programs had succeeded, and felt good about their impacts on students while they were in the program.

> • Said some urban students: "Without (the program) we would just hang out and make trouble." An urban parent said, "If (my child) had come here and been thrown into the regular system, I don't know what would have happened to her... Something happened to get (my child) on track. I don't know exactly what, but it was this program." An urban community member echoed these sentiments, saying, "Of all the entities I've been in contact with, I've been most impressed with what (this program has) done. Whatever they're doing, they're certainly doing it right." A reservation parent added, "It has really touched my kid."

Nevertheless, several issues were mentioned consistently throughout the interviews. ***Lack of communication*** among staff was a repeated concern. While staff at some schools felt that teachers and administrators were well informed about their at-risk program components, many more respondents felt the opposite was true. They recommended better formal and informal contacts between program staff, non-program teachers, and administrators.

Interviewees also called for better ***linkages between discrete program components, between programs and schools/districts, and between programs and the community***. Several respondents noted a lack of follow-up on students making the transition from junior high to high school, and from alternative programs to mainstream programs. Students, they felt, could be "lost" once they left the at-risk programs. With respect to program-community linkages, staff from some urban districts reported improved community links as a result of at-risk programs. Examples of good linkages included job placement programs and family support services linked to social service agencies. In contrast, establishing good community linkages proved problematic for rural and reservation districts.

- Said one reservation staff member: "Kids fall through the cracks without contacts with outside agencies."

Staff from some smaller districts said that certain elements of their programs had been delayed, disrupted, or not implemented as a result of late ***funding*** from the Arizona Department of Education. Despite letters of intent to fund from ADE, actual funds didn't reach some districts until mid-year.

- As one urban staff member said: "You cannot hire people in the middle of the third nine weeks of school. Other districts might be able to operate with a piece of paper, but our district will not allow us to operate without an approved budget because we cannot afford the liability."

Staff at some schools felt that ***program management*** had been good, and that systemic change was definitely occurring within their districts. Staff from several other schools, however, said their programs lacked focus and direction, and that planning was slipshod. Several staff called for more planning meetings to discuss program issues, and more support from administrators and school boards.

- Said one urban staff member: "... the program has had no direction. As far as I know, the program...is in limbo. There is no director." Regarding district management, another teacher said, "They're reinventing the wheel without consulting us first."

As with K-3 programs, leadership, program management, and communication issues at the 7-12 level appeared inextricably intertwined. Concerns voiced during the past two years indicate that a lack of stable leadership creates discontinuity in terms of program and school philosophies, staff and school organization, and program implementation. Given these concerns, Morrison Institute investigated the extent of administrative staff turnover since the inception of each program (i.e., 1988-89 for phase I programs; 1990-91 for phase II programs). Table 4-8 depicts the results of this investigation and reveals that high rates of key personnel turnover *are* cause for concern--particularly in the more isolated and rural programs.

Table 4-8

	7-12 PROGRAMS: ADMINISTRATIVE TURNOVER*	
Programs (by Region)	**At-Risk Project Director**	**Dist/School Administration**
Urban (5 programs)	2 out of 5 40%	2 out of 5 40%
Rural (4 programs)	3 out of 4 75%	3 out of 4 75%
Reservation (4 programs)	4 out of 4 100%	4 out of 4 100%
TOTAL (13 programs)	**9 out of 13 69%**	**9 out of 13 69%**

* Turnover data were extracted from Morrison Institute formative and summative evaluation reports: September 1990; January 1991; and June 1991.

PROGRAM SERVICES

This section examines the evaluation results pertaining to student, parent, and staff services. Student services were evaluated in terms of delivery systems and discrete academic, vocational, and social/support services. FY 1990-91 evaluation efforts focused on determining staff and client perceptions of services through surveys and interviews, as supplemented by external evaluations over time.

Student Delivery Systems and Services

Delivery Systems: Staff were surveyed regarding whether or not each of five types of delivery systems "worked": on and off-site alternative programs, special classes and/or course work, tutorial programs, and summer school[17]. Table 4-9 indicates that 7-12 staff perceived supplemental services (i.e., summer school, tutorial programs, and classes) as "working better" than on and off-site alternatives. Rating the effectiveness of delivery systems higher than their colleagues were: rural staff, grades 7-12 staff (grades 7-8 staff are least positive), and vocational instructors and administrators. Finally, program staff rated delivery systems higher than did aware and unaware staff, respectively.

Table 4-9

DELIVERY SYSTEM "EFFECTIVENESS": 7-12 STAFF PERCEPTIONS (N = 980)	
	Has worked very well (needs to be maintained as is): 4.0
Summer school	3.04
Tutorial programs	2.94
Special classes/course work	2.91
Off-site alternative programs	2.88
On-site alternative programs	2.81
	Has not worked at all (needs total revision): 1.0
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

[17]Relating these to the FY 1990-91 revised classification scheme, alternative schools are parallel to "off-site alternative schools," schools-within-schools encompass "on-site alternative schools," and classes/labs/activities encompass "classes/course work," "tutorial programs," and "summer schools" (as all of the latter are supplemental in nature to the traditional course of study).

In contrast to teacher perceptions, Table 4-10 illustrates how at-risk students *participating in* various delivery systems rated their overall "effectiveness." Table 4-10 indicates that alternative schools--perceived as *least* effective by teachers--were *most* positively perceived by student participants. Discrete academic and vocational "components," generally perceived in a positive light, were nevertheless least "effective" from the students' points-of-view. *As a whole, at-risk students and 7-12 staff surveyed did not see delivery systems eye-to-eye.*

Table 4-10

DELIVERY SYSTEM "EFFECTIVENESS": 7-12 STUDENT PERCEPTIONS (N =1,527)	
	Has worked very well*: 4.0
• Alternative schools (n=344)	2.90
• *Social/support* classes/labs/activities (n=309)	2.68
• Schools-within-schools (n=253)	2.67
• School-wide reform (n=100)	2.64
• *Academic* classes/labs/activities (n=380)	2.60
• *Vocational* classes/labs/activities (n=241)	2.56
	Has not worked at all*: 1.0
* "Working well" in this case is operationally defined as having produced changes in student behavior and attitudes. Means represent the average student ratings of 14 individual program outcomes (i.e., means of means). Program outcomes will be further defined and elaborated upon in the *Program Outcomes* section of this report.	

Types of Services: An additional question in the evaluation of student services was: Do specific types of services appear to "work" better than others? In response to this question, 7-12 students and teachers were asked to rate specific strategies on a 4-point Likert scale. Teachers were asked whether or not each strategy "worked" in meeting the academic and/or social/emotional needs of at-risk students (i.e., should be maintained or discarded). Students were asked to rate how much specific strategies had "helped" them either academically ("to do better in school"), vocationally ("to prepare for a job or career") or in terms of social support ("to feel better about yourself").

Recognizing that not all 7-12 programs addressed all three service areas in their at-risk programs, services were evaluated in the total school context. The rationale was that perceptions of "working" or "helping" should be reflected, regardless of where offered, *if* the program offered the service directly or provided it through an appropriate linkage.

Teacher and student ratings of services are presented in Table 4-11. This table indicates that both teachers and students rated academic/instructional services highest, social/support services second highest, and vocational services third. The rank order of specific services, however, varied between teachers and students. For example, teachers rated small group instruction as "working" best of the instructional strategies, while students viewed working at their own pace (self-paced instruction) as helping them the most.

Table 4-11

7-12 TEACHER/STUDENT RATINGS OF STUDENT SERVICES*			
Teacher Mean Rating (N = 982)		Student Mean Rating (N= 1627)	
Academic/Instructional Services		**Academic/Instructional Services**	
• Small group instruction	3.12	• Self-paced curriculum	3.04
• One-on-one tutoring	3.09	• Small group instruction	2.75
• Computer-assisted instruction	3.02	• Computer-assisted instruction	2.65
• Self-paced curriculum	2.83	• One-on-one tutoring	2.62
Academic/Instructional Average Mean	3.04	**Academic/Instructional Average Mean**	2.77
Vocational Services		**Vocational Services**	
• Career awareness	2.95	• Applied academics	2.79
• Applied academics	2.90	• Career awareness	2.66
• Vocational/occupational training	2.80	• Employability skills	2.62
• Employability skills	2.79	• Vocational assessment (IVEPs)	2.33
• Vocational assessment (IVEPs)	2.79	• Vocational/occupational training	2.20
• Work experience	2.75	• Work experience	1.91
• High tech labs	2.57	• High tech labs	1.77
Vocational Services Average Mean	2.86	**Vocational Services Average Mean**	2.33
Social/Support Services		**Social/Support Services**	
• Counseling	2.96	• Study skills class(es)	2.62
• Linkages/referrals	2.88	• Life skills class(es)	2.56
• Life skills/study skills	2.87	• Counseling	2.40
• Mentoring	2.76	• Mentoring	2.36
		• Linkages/referrals	2.23
Social/Support Services Average Mean	2.88	**Social/Support Services Average Mean**	2.43

* Ratings are derived from parallel, though not identical, 4-point Likert scales. Scores between 1.0 and 2.5 are generally negative (doesn't work/didn't help); scores between 2.5 and 4.0 are generally positive (do work/help). Items have been paraphrased for inclusion in this table.

Analyzing *staff* survey results by region, rural staff rated all services--academic, vocational, and social/support--more positively than their colleagues. Reservation instructors tended to rate academic/instructional services higher than did urban staff; urban staff rated vocational and social/support services higher than did reservation staff. Grade level analyses show that 7-8 staff and 9-12 staff were fairly similar in their responses to the effectiveness of academic/instructional and social/support services. Grades 7-8 staff were *not* as positive regarding vocational services as their 9-12 colleagues. The relatively few 7-12 staff members who responded consistently rated all services higher than their counterparts[18].

Analyzing *student* survey results by region, reservation students tended to be more strongly positive (i.e., rating services as "helped a lot") about all services than did their rural or urban

[18] Teacher survey results were also analyzed by the each respondent's primary role and level of program awareness. For all services, administrators and vocational instructors rate services as "working well" more frequently than academic instructors and specialists. Non-program, but aware, staff were most positive regarding program services; unaware staff were least positive.

counterparts. Urban students rated vocational and social/support services higher than did rural students, Student responses analyzed by grade reveal higher student satisfaction among 9-12 students with academic/instructional services, and among 7-8 grade students with social/support services. Grade 7-8 students indicated they received fewer vocational services than did their 9-12 peers; however, those students who did receive vocational services (7-8 and 9-12) rated their effectiveness similarly.

One final analysis of student ratings examined *what* services they received in relation to *how* they received them. It was hypothesized that students in alternative schools, schools-within-schools, and school-wide reform efforts would reflect roughly equal satisfaction with all three types of services, since all were integrated/coordinated within these types of delivery systems. In contrast, students in academically-focused classes/labs/activities were not expected to highly rate vocational or support services; students in vocationally-focused components were not expected to highly rate academic or support services; and, students receiving support services were not expected to highly rate academic or vocational services. Table 4-12 presents the results of this analysis.

Table 4-12

7-12 STUDENT EVALUATION OF SERVICES BY DELIVERY SYSTEM (N =1,627)

Type of Delivery System	Academic Services	Vocational Services	Support Services	TOTAL SERVICES
• Alternative schools (n=344)	*2.97	2.37	2.47	*2.55
• Schools-within-schools (n=253)	*2.65	2.29	2.43	2.42
• Classes/Labs/Activities				
• Academic (n=380)	*2.73	2.22	2.40	2.41
• Vocational (n=241)	*2.75	2.48	2.38	*2.52
• Support (n=309)	*2.61	2.27	2.49	2.42
• School-wide reform (n=100)	*3.00	*2.54	2.42	*2.61

Scale: 1.0 = Don't know/Didn't get help; 2.0 = Did not help at all; 3.0 = Helped a little; 4.0 = Helped a lot
* = over 2.5 indicating *some* help

Table 4-12 illustrates several points. Among alternative school, school-within-school, and school-wide reform student participants, there *was not* equal satisfaction with all types of services. In fact, only academic support was perceived as having helped substantially. On the other hand, alternative school and school-wide reform students were apparently satisfied, overall, that services provided had been helpful.

Comparing ratings among the three types of class/lab/activity participants shows that vocational components received the highest ratings from students in both academic and vocational services; support-oriented components *did* receive higher ratings regarding social support than academic and vocational components.

Overall student results suggest that alternative schools, vocational components, and school-wide reform efforts are "most effective" in delivering student services.

Further information on student services was obtained through teacher survey open-ended comments and interview data from students, parents and staff. Open-ended comments and interview results are summarized below with respect to each type of student service.

Delivery systems and academic services: As depicted in Figure 4-1 (p. 74), the majority of open-ended teacher comments regarding program strengths were in this area. Regarding specific academic services, one-on-one tutoring and computer-assisted instruction were the most frequently noted program strengths, followed by self-paced instruction and small group instruction. Other comments suggested that student achievement had increased as a result of academic services and expressed satisfaction with specific delivery systems (e.g., alternative schools; extended-day programs). Additional comments indicated that the at-risk programs had allowed for schools to expand their range of offerings. Almost all types of services (e.g., CAI) were targeted for change by a few respondents. Most changes, however, centered around the need to "change" the curriculum within at-risk programs and set "higher standards" for at-risk participants. Also noted were needs for more alternative educational services "outside" the regular school day.

Interview responses from students, parents and staff varied widely--perhaps because of the diverse nature of individual at-risk programs and the isolation of discrete components. Nevertheless, some commonalities did occur. Respondents from all three regions most frequently agreed that students in at-risk programs had benefitted from extra ***individual attention*** which had been provided by a ***caring staff***. The extra attention, respondents said, raised students' self-esteem and helped them improve their grades and stay in school.

> • Said one urban student: "Seeing teachers who care makes you want to graduate and want to come to school. Before, I wouldn't come to school. Now I try my best. I missed the bus once and walked to school because I wanted to come so bad." A reservation student added: "Teachers take time to talk to you about school."

In a similar vein, ***tutorial programs*** drew praise from some respondents because they, too, provided extra individual attention. Tutoring provided a "support system" for one pupil, according to his parent. And yet concerns about tutorials were also expressed: sessions were too short; tutors needed better communication with students' teachers regarding homework assignments; and, tutorials weren't reaching the most at-risk students. After-school tutorials, in particular, were generally considered ineffective. Although one teacher said that her students had improved in math as a result of after-school tutorials, most respondents from each region said these programs suffered because they made the day too long for students, were poorly attended, and interfered with extra-curricular activities.

Remedial ***computer labs*** received a modest endorsement from students for helping them in certain areas such as math and English. Also, a reservation school's move to fewer, longer class periods was widely supported by both students and teachers at that school.

Favorable opinions were expressed toward ***alternative programs***, particularly by urban respondents. Students, parents, and staff agreed that alternative programs had prevented and retrieved many drop-outs, had provided a second chance for students to "grow up," and allowed a more flexible teaching style that was better suited for at-risk kids.

> • "I was thinking about dropping out as soon as I could," said an urban student. "[The alternative program] helped me to think about things." An urban parent added, "The

program has done wonders (for my daughter). Her grades have come up. She's been able to make up almost all her credits."

Students said they learned faster in alternative programs. They liked the curriculum and, as one said, they "were no longer embarrassed to ask questions" in class. They especially liked ***self-paced instructional programs***. Students repeatedly cited the chance to work at their own speed in classes, whether it be fast or slow, as one factors that helped them stay in school.

- One reason self-pacing is effective, said an urban alternative school student, is because: "I work quickly and get frustrated" in a regular classroom. Said another: "I got bored with high school and I quit going even though I was getting good grades."

Also noted in teachers' open-ended comments, ***curriculum concerns*** were apparent among staff interviewed as well. While several students and teachers defended the academics of alternative classes, characterizing them as interesting and rigorous, others said that credit requirements were too "easy" and that students weren't "intellectually challenged." Some called for a curriculum audit of their programs to help them shore up what they perceived as weak academics. Some alternative programs were also criticized by respondents for having poor facilities and insufficient books and materials. "Much of our stuff is outdated," said an urban alternative school teacher.

Vocational services: Figure 4-1 shows that these services received the least number of comments regarding strengths. Of the strengths noted, however, a majority centered on the positive aspects of employment skills training and work experience programs. Other comments noted the benefits of vocational/occupational course work, career awareness opportunities, and "high tech labs." By far, most recommendations for change focused on the need to expand vocational/occupational course work. A number of instructors commented that "vocational training is inadequate."

Interviews revealed that ***occupational training classes*** (such as computer skills, mechanical skills, silversmithing, and printing) received nearly universal praise from respondents who were involved with them. Students credited the classes with raising their self-esteem, increasing their motivation to attend school, and improving their sense of responsibility.

- According to one reservation student, an applied technology class "makes things more interesting than in other classes." Another emphasized, "It is important to teach kids how to operate things." A teacher added, "The kids prefer to learn by doing."

Classes that taught ***employability skills*** (such as interviewing, presentation, and punctuality) were also valued by students. The only negative comments regarding the classes were that they were too limited in scope or availability.

Job placement programs for students, though primarily limited to a few urban districts, were strongly supported by those students, teachers, and employers who were involved with them. Students said they appreciated the chance to "get their foot in the door" with employers and earn some money. Staff said the programs established valuable links to the community. And employers said the student workers were reliable and able to follow directions.

- Said one student: "I learned how to sell merchandise." An employer commented "He outperformed a college student." Another employer added, "It reduced my employee turnover rate...and this is directly related to this program."

Across all regions and focus groups, respondents called for more, and better, practical programs geared toward teaching students employability skills and finding them jobs.

Social/support services: Two of these services were singled out repeatedly in open-ended comments as program strengths: counseling services and social service linkages and referrals. Not surprisingly, these two areas also were the top two services targeted for improvement. Recommendations largely focused on the need to provide *more* counseling and earlier intervention, as well as to expand and improve linkages with other community-based agencies. Many noted that such linkages are beneficial, but stated that "services provided are inadequate."

These themes also arose during interviews. For example, respondents considered ***support personnel*** such as case managers, social workers, and counselors as key players in most effective at-risk programs at urban and reservation schools. Students, parents, and staff credited those support personnel with helping provide links with social service agencies as well as providing "safe" links between students and teachers, between students and parents, and between schools and families.

- Said an urban student: "(The case managers) make me feel wanted, like I have a future to look forward to. They're like my second parents. I know I wouldn't be in school if it weren't for them."

Not all support personnel, however, were held in equal esteem. A contract counseling service at one school was accused of being "overpriced and overrated," and was said to have not "bought into the school's plan." A counseling department in one school was characterized as "lacking energy." And even some respected counselors and social workers were considered ineffective because they were overburdened with cases and could not provide regular individual attention to students.

Regarding ***drug and alcohol prevention programs***, a few respondents indicated that at-risk funding had augmented such efforts at their schools. Some felt that more of these programs were needed for at-risk youth.

- One such program caused a reservation student to comment that he had learned "how to have fun without drinking" and had changed his attitude toward school. The program "was worth it," he said.

In ethnic rural and reservation districts, a few students said they appreciated newly introduced instruction in cultural values. "***Cultural counseling***" was an adjunct of some support programs for at-risk students.

Several parents and staff commented on discipline and attendance policies in at-risk programs. Many parents and a few staff attributed student successes to better "control" in alternative schools and classrooms. Some respondents, however, accused alternative programs of instituting double standards. They felt that at-risk students were "mollycoddled" and allowed to break rules.

Respondents, especially students, repeatedly mentioned positive "outcomes" from the at-risk programs. Among these were: increased self-esteem, improved behavior, better attitude, more sense of responsibility, improved grades, increased motivation to attend school, and fewer dropouts. A few also mentioned reduced incidence of drug and alcohol abuse. In addition, students at rural and reservation schools emphasized that they perceived more "opportunities" for them as a result of at-risk programs.

Parent Services

Many 7-12 at-risk pilot programs had "adjunct" parent involvement activities. These were investigated to determine which strategies worked better than others for older pupils' parents. Using a 4-point Likert scale, teachers were asked whether or not each of seven strategies "worked for involving parents of at-risk students in their child's education."

In recognition of the fact that not all parent services were addressed specifically under the auspices of the at-risk programs, services were evaluated in the total school context. The rationale was that perceptions of "working" should be reflected regardless of whether or not the service was an "official" part of the program. Staff ratings of services are presented in Table 4-13 which indicates that staff rated social events and verbal communication as working better than other parent involvement strategies. Parent workshops were perceived as least effective for parents of 7-12 students.

Table 4-13

7-12 PARENT SERVICES EVALUATION (N = 980)	
	Has worked very well (needs to be maintained as is): 4.0
School social events	2.76
More verbal communication between the parent and teacher/school	2.74
Formal home visits	2.72
More counseling/psychological services	2.72
More written material mailed/sent to the home	2.62
Structured classes for parents (e.g., GED, ESL)	2.55
Parent workshops	2.32
	Has not worked at all (needs total revision): 1.0
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

Regionally, parent services were rated highest by urban staff and lowest by reservation staff (see Appendix B, Table B-8). Grade 7-8 and 7-12 staff rated parent services more effective than did 9-12 staff. Survey results analyzed by staff role indicate that specialists tended to rate parent services as working either well or very well, while administrators tended to say they "didn't work well." Vocational instructors tended to view parent services as more effective than did their academic colleagues. Both program staff and non-program staff who were aware of at-risk services in their districts viewed parent services as working better than did unaware non-program staff.

Students were not surveyed regarding the effectiveness of parent services; rather, they were asked to indicate whether or not their parents had helped them more, or had come to school activities more as result of their participation in the at-risk programs. These results will be discussed in the *Program Outcomes* section of this chapter.

Staff open-ended comments regarding parent services are presented in Figure 4-2 (p. 75). Parent services were considered program strengths by 5 percent of those responding; these services were targeted for change by 12.5 percent of those responding. While some staff indicated that parent involvement was not the responsibility of 7-12 programs, most comments were supportive of increased efforts to involve parents.

An analysis of interview data regarding parent involvement yields two general themes. First, some parents and teachers in all three regions felt that ***support services*** provided by schools were effective means for both helping families and connecting them to the education process. These services were provided by school social workers, counselors, and case managers.

- Praising one case manager, an urban parent said: "He does his best. If I have a problem, I call him or he calls me."

Second, most respondents felt that ***overall parent involvement*** was weak. Respondents split, however, on the relative importance of this circumstance. Some, for instance, said that schools should take action to increase contacts with parents and attract them to school activities.

- In this regard, one staff member said: "Parent contacts are what make the kids successful. Parental involvement is the bread and butter and butter of this program. If we don't have it, we lose these kids."

Others asserted that seeking parent involvement at the secondary level was a relatively poor use of time and money. If parents weren't involved by the time their children were in high school, these respondents argued, then they probably never would be. Also, some respondents reported that many high school at-risk students neither needed nor wanted parent involvement because they no longer respected their parents.

Respondents mentioned a few site-specific strategies that they considered effective in garnering parent involvement. At some urban schools, respondents agreed that ***parent workshops and special awards nights*** had successfully drawn parents to school.

- Regarding an awards banquet in which he received recognition, one urban student said: "It was good to have my parents there because they are used to having me get in trouble. Since the banquet, they have helped me a lot with homework and helped me out more in general."

Some effective parent involvement strategies that parents said schools should implement included home visits and frequent informational contacts such as notes or calls from teachers. Parents also said that schools should present a "welcome" atmosphere to parents, and that staff should exhibit an attitude of responsiveness to parental concerns.

Staff Services

As was done for K-3 at-risk programs, 7-12 evaluation efforts were directed toward determining satisfaction with staff development and training. Teacher survey respondents were asked to reflect on what activities "worked for training staff to work effectively with at-risk students." Table 4-14 presents the results of this evaluation and shows that *all* staff training activities included on the survey were rated below a 3.0, indicating that none were perceived as "working well." Conferences/academies and formal instruction (e.g., college classes) received the highest ratings; visits to other schools/programs were viewed as least effective.

Table 4-14

7-12 STAFF SERVICES EVALUATION (N = 980)	
	Has worked very well (needs to be maintained as is): 4.0
Conferences/academies	2.68
Formal instruction through a college course or other training class	2.65
Regularly scheduled program planning/development meetings (i.e., specific to at-risk)	2.63
Workshops/In-service delivered by outside consultant/trainer	2.58
Workshops/In-service delivered by district staff	2.58
Workshops/In-service provided on a regularly scheduled basis	2.54
School/program visits and/or observations outside of own school	2.51
	Has not worked at all (needs total revision): 1.0
Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well	

Urban staff tended to rate staff services higher than rural and reservation staff (see Appendix B, Table B-8). Once again, 7-8 and 7-12 staff rated services more positively than their 9-12 colleagues. Academic instructors, again, rated services lower than all other respondents by role, and program staff rated services higher than did their aware and unaware non-program colleagues.

Figure 4-2 (p. 75) shows that of the 568 open-ended comments regarding program strengths, 42.2 percent centered on the dedication and qualifications of program staff. In contrast, only 12.5 percent of the recommendations for change concerned staff. Of the recommendations made, however, respondents emphasized the need for additional staff training.

With regard to interview data, teachers in some districts said they were satisfied with the number of opportunities available to them; however, most teachers called for more staff development opportunities in general. Suggestions from staff included the need for more on-campus workshops, more workshops dealing with native cultures, and more visitations and observations of other schools in order to stimulate new ideas. The most frequently recorded comment addressed the need for *more conferences, workshops, and in-services aimed specifically at strategies for working with at-risk youth.*

PROGRAM OUTCOMES

Outcomes for 7-12 at-risk programs were examined in several ways. First, during FY 1990-91, pilot site personnel reported the end-of-semester status of their student participants. Second, staff and students were asked their perceptions regarding program outcomes. Third, student outcome data--including absenteeism, credits earned, and achievement test data--were collected via the cohort study. Fourth, efforts were made to collect site-specific outcome data from participating districts through self-reports.

Program Student Status

Staff of the 7-12 programs were asked to record the end-of-semester status of their student participants with respect to specific program outcomes (e.g., graduated, dropped out). Data were averaged for fall and spring semesters and are reported in Table 4-15.

Table 4-15

7-12 PROGRAM PARTICIPATION OUTCOMES (N = 7,296*)								
POSITIVE OUTCOMES			NEGATIVE OUTCOMES			STATUS UNKNOWN		
Includes: • Remained in program • Transition (regular program) • Graduated from HS/G.E.D.			Includes: • Dropped out • Detention Center/Corrections			Includes: • Transferred out-of-district • Don't know • Other (e.g., deceased)		
TOTAL	**6,477**	**88.8%**	**TOTAL**	**198**	**2.7%**	**TOTAL**	**621**	**8.5%**
* Numbers reflect *yearly averages*; Pima County Detention Center is excluded from this analysis.								

Table 4-15 shows that less than 3 percent of the total student participants were known to have dropped out; of the 621 students who transferred or whose whereabouts were unknown, however, there might be an additional percentage of dropouts. Even so, Table 4-15 indicates that *a vast majority of student participants stayed in school or graduated.* According to district reports, 62 students received a high school diploma or a G.E.D. as a result of program participation. Overall, positive outcomes reflect impressive numbers--particularly considering the fact that a minimum 5 percent of these students were "retrieved" dropouts upon entry into the at-risk programs[19].

Perceptions of Program Outcomes

Staff Perceptions: Seven program outcomes[20] were included as items to be rated on the *7-12 Teacher Survey*. Two outcomes pertained to student outcomes, one to parent involvement, one to staff development, and three related to "overall program" outcomes. Table 4-16 shows that the mean score of all items is below the score indicating "achieved to a high degree." All but one outcome--improved student self-esteem--were perceived to have been achieved only to a *very low to low* degree (falling below a mean score of 2.5).

Regional analyses indicate that rural staff were slightly more positive in their assessment of program outcomes than urban staff; both were notably more positive than reservation staff who perceived all outcomes as having been achieved to a very low to low degree. Again, 7-8 and 7-12 staff rated outcomes higher than their 9-12 counterparts. Administrators, specialists and vocational instructors were all more positive about outcomes than academic instructors. Program staff rated outcomes higher than did either aware or unaware non-program staff.

[19] The five percent estimate is known to be underestimated as not all districts reported this information.

[20] These seven program outcomes were gleaned from reviews of pilot program proposals and represent commonly shared or globally desirable outcomes for all programs.

Table 4-16

7-12 STAFF PROGRAM OUTCOMES EVALUATION (N = 980)		
Type of Outcome	**Outcome**	**Very high degree: 4.0**
Student	Improved self-esteem of at-risk students	2.59
Student	Improved academic achievement of at-risk students	2.42
Program in General	A comprehensive educational program	2.31
Program in General	Better linkages among school programs	2.28
Program in General	Better linkages with community-based organizations	2.25
Staff	Increased staff skills for working w/at-risk students	2.16
Parent	Improved parent involvement for parents of at-risk	2.08
		Very low degree: 1.0
Scale: Achieved to...1.0 = Very low degree; 2.0 = Low degree; 3.0 = High degree; 4.0 = Very high degree		

Teacher survey respondents also were asked to reflect on the success of the 7-12 at-risk programs to provide services to "dropouts and potential dropouts" as specified by H.B. 2217 (1988). Specifically they were asked: "Do you feel that your district/school efforts to help at-risk pupils are, indeed, serving 'dropouts' and 'potential dropouts' such that the students *will* complete high school graduation requirements?" Table 4-17 summarizes teacher responses to this question by region[21].

Table 4-17 reveals that one-third of the staff members in rural districts *felt strongly* that they *were* promoting completion of high school requirements; urban staff had the largest relative percentage of their respondents claiming programs were *not* keeping students on track. Broken down by grade level, faculty working with higher grades (9-12) responded more strongly than their 7-8 colleagues that they were keeping students on-track.

Table 4-17

ARE 7-12 STUDENTS "ON-TRACK?" (N = 843)				
REGION	Urban/Suburban (n=202)	Rural (n=565)	Reservation (n=76)	TOTAL
YES, to a large degree	18%	33%	12%	27%
YES, to some degree	63%	52%	77%	57%
NO	16%	11%	9%	12%
No response	3%	4%	2%	4%

While Table 4-17 shows that a majority of respondents said they *do* believe that they are keeping students "on track," the diversity of opinion regarding this issue is reflected in the comments below:

[21] Open-ended comments could not be linked with individual respondents; therefore, analyses could not be conducted by respondent role and level of awareness.

- YES, to a large degree:

  "Most of our graduates ...either have children or need to work to support families. Without our program and its flexible hours, these students would not have been able to complete their high school requirements and earn their diplomas."

  "The programs that have been initiated have led to a reduction of the drop-out [and] pregnancy rate. There is also little evidence of widespread drug abuse on campus."

- YES, to some degree:

  "I feel the students will probably graduate but with minimal skills. They seem to be low especially in the areas of reading/writing or communication skills..."

  "The at-risk program is good, but some students may use the program as an easy out in lieu of going to high school."

- NO:

  "I don't believe that individualized/group instruction in [the at-risk program] meets the academic levels to make these students competitive for further academic/career training. I don't believe students are held accountable for misbehavior. Rules are not enforced, making the teaching situation for teachers very difficult."

  "Students will not complete high school because there are no basic training here regarding study habits that are needed at the high school level [sic]."

While there has been much faculty support for alternative programming for dropouts and potential dropouts, a concern expressed by many was capsulized in the following question: "While districts such as yours *are* implementing alternative programs/activities, some concern has been voiced that such programs often 'water down' curricula and allow students to exit high school *without* appropriate skills. Do you feel that this is occurring in your district/school?" Table 4-18 summarizes the responses to this question by region.

Table 4-18

"ARE 7-12 STUDENTS RECEIVING WATERED DOWN CURRICULA?" (N = 986)				
REGION	Urban/Suburban (n=202)	Rural (n=565)	Reservation (n=76)	TOTAL
YES, to a large degree	13%	13%	16%	13%
YES, to some degree	44%	43%	49%	44%
NO	34%	36%	28%	35%
No response	9%	8%	7%	8%

Table 4-18 reveals that many respondents across regions felt their curriculum was being "watered down" to some degree. Reservation staff appeared most concerned that this *is* an issue

(with only 28 percent "No" responses). The diversity of opinions on this topic is illustrated below.

- YES, to a large degree:

  "At the high school many courses have been designated LEP etc. and are supposed to present the same curricula as their 'parent' courses. This does not happen and these students are not receiving equal skills. These classes end up as 'bozo' classes...."

  "The largest group of dropouts are those who cannot speak English. English is not required early enough, long enough, or with sufficiently high standards to allow the students to study a normal high school program. The 'watering down' is due to the same lack of English ability."

- YES, to some degree:

  "Although we try to maintain high standards and avoid 'watering down' the curricula, it does happen to some extent. Reasons for this stem from inadequate time available to work one-on-one with students. As a result, students much do much of their work on an individualized basis and therefore do not learn the content at as high a degree...."

  "I feel this is occurring...across the county with at-risk and all other students."

- NO:

  "We have very competent and devoted teachers overseeing our program. Vocational and academic excellence is demanded and expected from our program...."

  "The same is expected of the at-risk student as the general populace."

In summary, the *7-12 Teacher Survey* assessed staff perceptions of program outcomes. Survey results (Table 4-16) indicate that program outcomes were perceived as having been achieved only to very low degrees. While a majority of respondents viewed programs as keeping students on-track toward graduation (Table 4-17), many also felt that graduating students might have received "watered down" curricula (Table 4-18).

Student Perceptions: Fourteen program outcomes were included as items to be rated on the *7-12 Student Survey*. Two outcomes each pertained to parent involvement and program staff. Ten pertained to changed attitudes and behaviors relevant to enhanced academic, vocational, and support services. Table 4-19 depicts all students' ratings of program outcomes[22].

Only two outcomes were not viewed positively (means below 2.5): at-risk programs were *not* viewed as being the main reason for being in school or as providing opportunities for parent participation in school activities. Notably, perceptions of staff involvement were among the most highly rated outcomes; perceptions of parent involvement among the lowest. Student outcome data were analyzed by

[22] With the exception of Pima County Detention Center students, who were not administered a student outcomes section on their surveys. Pima County Detention Center is excluded from all remaining analyses and discussion of student outcomes -- thus the total number of program components evaluated is 54.

region, grade level, and type of delivery system using chi square analyses and comparisons of frequencies and means. Significant chi square results were obtained for every analysis, suggesting differences between students on each variable. These analyses are summarized briefly.

Table 4-19

7-12 STUDENT PROGRAM OUTCOMES EVALUATION (N = 1,627)		
Type of Outcome	**The [at-risk program*] has...**	**Agree a lot: 4.0**
Program	• helped me to improve my grades	2.96
Staff	• staff who really do care about me	2.94
Program	• made me committed to graduating	2.88
Staff	• more helpful teachers than others	2.84
Program	• helped me set goals for my future	2.82
Program	• improved my attitude about school	2.77
Program	• let me earn school credits	2.73
Program	• helped me feel better about myself	2.72
Program	• prepared me for a "real world" job	2.66
Program	• helped me better deal with problems	2.58
Program	• made me come to school more often	2.56
Parent	• gotten my parents to help w/school	2.51
Program	• been the main reason I am in school	2.41
Parent	• prompted parent participation	2.17
		Disagree a lot: 1.0

SCALE: 1.0 = Disagree a lot; 2.0 = Disagree a little; 3.0 = Agree a little; 4.0 = Agree a lot
* Surveys were customized by name for each of the 54 programs or program components representative of the 7-12 at-risk pilot project; item wording has been modified slightly for inclusion in this table.

Regarding **parent involvement**, urban programs appeared most successful in soliciting parents to come to school and in prompting them to help their at-risk teens Students in eight of 17 components (47.1 percent of the urban programs) agreed that *both* parent outcomes were achieved. In comparison, three of 23 rural components (13 percent) and none of the reservation components were "successful" in recruiting *both* parent support and participation. Across regions, students agreed that parents helped more with their schoolwork as a result of programs in far more cases (27 of 54 programs or 50 percent) than they agreed that programs had provided their parents with opportunities to become involved (12 of 54 programs or 24 percent).

Students in 7-8 grade components agreed with *both* parent outcomes more than did their 9-12 peers. Five of 14 (36 percent) 7-8 program components involved parents compared to six of 40 (15 percent) at the high school level. Notably, all three of the rural programs cited above as being "successful" serve grades 7-8. None of the six delivery systems was "successful" with respect to both parent outcomes, and only three were regarded as having promoted parent support at home--alternative schools (mean = 2.55), academic classes (mean = 2.51), and social/support activities (mean = 2.60). Parent participation mean ratings were in the negative range (i.e., 1.0-2.5) for all six delivery systems.

With respect to **staff involvement**, urban programs appeared most positively perceived in terms of caring and helpful staff. Students in 14 of 17 components (82 percent of the urban programs) agreed with *both* the fact that staff cared about them and that program staff were more helpful than other teachers. Reservation students in ten of 14 components (71 percent) also agreed that staff were helpful

and caring, while rural students in 14 of 23 components (61 percent) agreed. Notably, of the nine rural components where staff were perceived as either unhelpful or uncaring, seven components were located in two districts. Students in 7-8 grade components appeared much *less* positive regarding staff than students in 9-12 components. Eight of 14 (57 percent) 7-8 program components were perceived as having unhelpful and/or uncaring staff compared to 12 of 40 (30 percent) at the high school level.

Delivery system differences were most pronounced with respect to alternative school students, whose mean ratings regarding staff helpfulness and caring are the only means above 3.0 (3.2 and 3.15 respectively). School-within-school and school-wide reform teachers were perceived as next most helpful (means = 2.87). Discrete components' staff, although generally perceived positively, were not considered as helpful as staff in other delivery systems. All delivery systems were perceived to have caring staff. Excluding alternative schools (which have already been addressed), staff were perceived as most caring in the following order: social/support components, academic/instructional components, vocational components, schools-within-schools, and school-wide reform efforts.

Regarding **program outcomes**, rural students were *most strongly* positive regarding overall outcomes; however, roughly only one-third of both the rural and urban programs were rated by students as having produced all 10 outcomes. Across regions, students credited programs with improving their grades, making them committed to staying in school, and helping them set future goals. Urban students also credited programs with improving their self-esteem; rural students credited their programs with helping them improve their attitude toward schooling; reservation students credited their programs with preparing them better for jobs in the "real" world. Perhaps not surprising, high school participants agreed more with program outcome statements than did junior high students.

Student outcome ratings by delivery system are presented in Table 4-20. For heuristic reasons, outcomes were conceptualized and categorized to correspond to primary academic, vocational, and support service outcomes, as well as to more general outcomes. Table 4-20 shows that students in alternative schools rated the primary academic outcomes highest; students in academic components rated them second highest. The highest means regarding primary vocational outcomes came from students in vocationally-oriented components; likewise the highest support services ratings came from students in support service components. For program outcomes in general, alternative school students consistently rate all outcomes higher than students in the other delivery systems.

Table 4-20

	STUDENT RATINGS OF PROGRAM OUTCOMES BY DELIVERY SYSTEM									
	Primary Academic Outcomes		Primary Vocational Outcomes		Primary Support Services Outcomes		Program Outcomes in General			
	Grad-- improved	Earned more credits	Better prepared for a job	Help setting goals	Better self-esteem	Better coping skills	Stayed in school	More committed to school	Attend more often	Better attitude re:sch.
Alt.	3.23	3.18	2.77	2.90	2.86	2.74	2.83	3.24	3.02	2.95
SWS	2.94	2.81	2.63	2.75	2.57	2.51	2.65	2.88	2.63	2.76
CLA:A	3.08	2.72	-2.49	2.69	2.57	-2.42	-2.23	2.69	-2.35	2.64
CLA:V	2.62	-2.40	2.89	3.01	2.76	-2.44	-2.20	2.73	-2.35	2.62
CLA:S	2.80	-2.48	2.65	2.79	2.88	2.81	-2.31	2.93	2.52	2.78
Reform	3.03	2.95	2.57	2.86	2.58	2.55	-2.12	2.80	-2.44	2.74

Alt = alternative school; SWS = school-within-school; CLA = classes/labs/activities where A = academic, V = vocational, and S = social/support; Reform = school-wide reform; means noted with a minus sign are generally negatively perceived with a majority of students disagreeing that the outcome was achieved.

In sum, alternative school students clearly attributed changed attitudes and behaviors to their participation in these programs. Notably, SWS students were the only other group of students to perceive all outcomes positively. Vocational and support components were perceived positively by those directly participating in them. Support service components, in particular, appeared to be have a positive effect on attitudes.

Student Attrition: Can programs make a difference if the students don't remain in school?

As was done for K-3 programs, student attrition was analyzed for 7-12 programs. An original "cohort" of 1,307 7-12 students was identified in FY 1989-90. Table 4-21 presents the status of these students (by region) as of the end of FY 1990-91.

Table 4-21

STATUS OF 7-12 COHORT (End of FY 1990-91)									
REGION	Original Cohort	Graduated		Dropped Out/DOJC		Unknown*		Promoted (Remaining)	
Urban	431	62	14%	67	16%	210	49%	92	21%
Rural	599	55	9%	79	13%	339	57%	126	21%
Reservation	277	14	5%	52	19%	109	39%	102	37%
TOTAL	**1,307**	**131**	**10%**	**198**	**15%**	**658**	**50%**	**320**	**25%**

*Unknown includes students "lost" due to missing data and students transferring out of the original districts.

Table 4-21 shows that of the original cohort, only 320 pupils (25 percent) of the original cohort are still available for longitudinal tracking. Over the course of two years, 10 percent of the cohort graduated, 14 percent dropped out, 1 percent were incarcerated, and 50 percent were unable to be tracked (12 percent transferred and 38 percent were "lost" to missing data). Urban areas reflected the highest graduation rates, while reservation areas had the highest reported dropout rates, and rural areas had the highest number of students recorded as having transferred (making the percentage of "unknown" in this region particularly high). As of the end of FY 1990-91, the urban and rural cohort encompassed only 21 percent of the original students; the reservation cohort retained 37 percent of its original composition.

When these data are compared to outcomes reported in Table 4-15 (p. 87), an apparent discrepancy is revealed between data sets. However, removing students "lost" through missing data from Table 4-15 and recalculating outcomes on the remainder of the cohort students produces the following: there are 56 percent "positive" outcomes (remaining in school/graduated), 25 percent "negative" outcomes, and 19 percent for whom outcomes are unknown. Comparing data from Tables 4-15 and 4-21 shows that single school-year reports (as reflected in Table 4-15) reflect higher percentages of positive outcomes/lower percentages of negative outcomes than do multi-year reports. More than anything else, however, the comparison suggests that a majority of "negative" outcomes and "unknown" student statuses are attributable to events that occur during summer months which are reflected exclusively on Table 4-21.

In sum, high rates of student attrition are apparent in the cohort. Assessing the nature of student attrition is difficult, however, because of the extent of students "lost" through unreported data. Their status is not altogether clear. What *is* clear is that very few of the students originally targeted for tracking can be tracked through FY 1991-92.

Student Outcomes

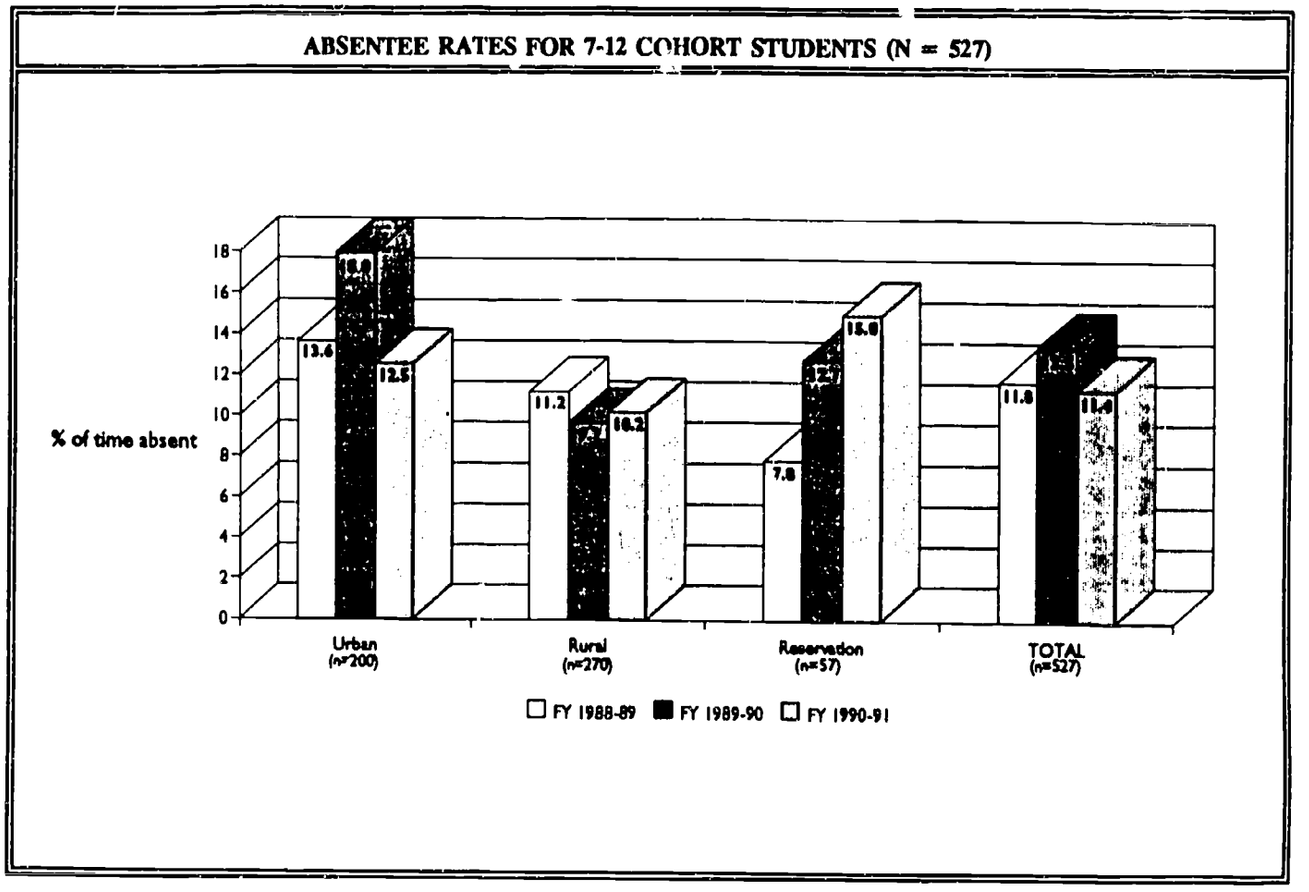
In an additional endeavor to gauge whether or not programs have made a difference in students' academic performance, three primary student outcomes--attendance, achievement, and credits earned--were examined for 7-12 cohort students for whom three years of data were available.

7-12 Student Attendance: In the *Arizona At-Risk Pilot Project FY 1989-90 Project Report* (Bierlein et al., 1990), a two-year trend reflected an increase in absenteeism among 632 of the 7-12 pilot program students. For this report, three years of attendance data were available for 527 students. Overall, absenteeism *has not* continued to rise during the third year of implementation (i.e., *students have attended more*). In fact, FY 1990-91 attendance is the highest of all three years studied, recording the lowest number of days absent and the highest number of days enrolled[23].

Total and regional attendance patterns for the 7-12 cohort are depicted in Figure 4-3. Regional analyses show that the most dramatic change in attendance occurred among urban teens. Rural students' attendance remained relatively stable and absentee rates for the 57 reservation students increased steadily.

[23] These are calculated by taking the average number of days absent divided by the average number of days enrolled.

Figure 4-3

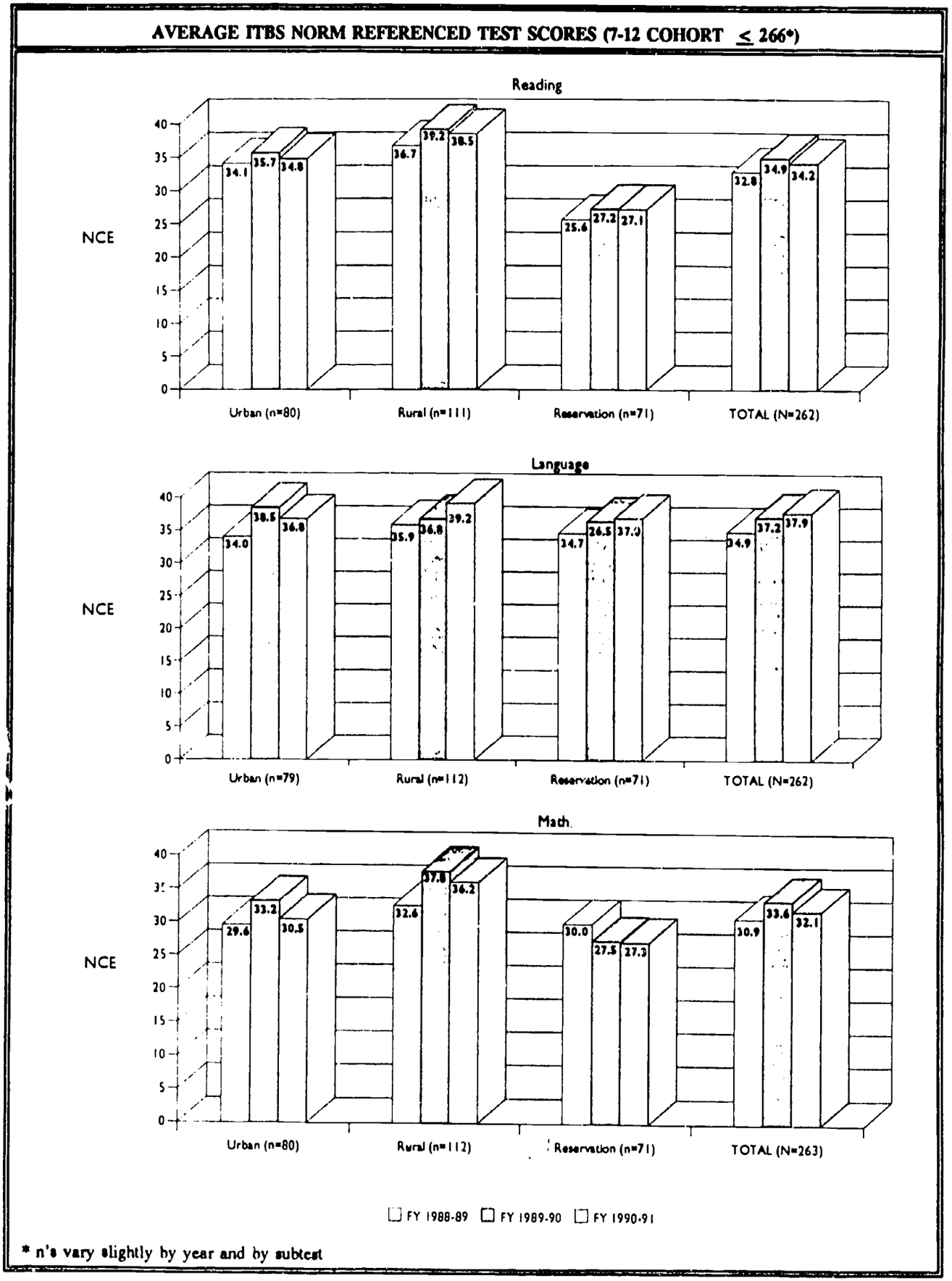


7-12 Student Achievement: ITBS and/or TAP scores for students were examined to discern any changes in test performance over time. *Changes in student performance, however, cannot be attributed solely to participation in the at-risk program.* Three-year trends in student achievement were examined using normal curve equivalent (or NCE) scores. Figure 4-4 portrays NCE scores for reading, language, and math subtests of the ITBS/TAP, by total and by region.

These data show t[illegible] the over 260 students for whom three years of data were available, reading scores have remained relatively stable for the total population, and for each region. All FY 1990-91 scores are within 1 percent of 1989-90 scores, and show overall gains since FY 1988-89. An overall trend toward increased language skills is depicted on Figure 4-4, which also shows steady language gains in rural and reservation areas. Math scores, too, have remained relatively stable for the total population and for each region. FY 1990-91 total scores are slightly lower (i.e., .5 percent) than 1989-90 scores; however, they are higher than FY 1988-89 scores.

In summarizing Figure 4-4, students show gains in all three areas compared to year one (FY 1988-89) NCE scores, with most gains reflected in language. In a majority of cases, rural at-risk students out-performed their urban and reservation peers in all areas. Notably, reservation students demonstrated considerably lower reading scores than their peers.

Figure 4-4


AVERAGE ITBS NORM REFERENCED TEST SCORES (7-12 COHORT ≤ 266*)
Reading
NCE
34.1
35.7
34.8
36.7
39.2
38.5
25.6
27.2
27.1
32.8
34.9
34.2
Urban (n=80)
Rural (n=111)
Reservation (n=71)
TOTAL (N=262)
Language
NCE
34.0
38.5
36.8
35.9
36.8
39.2
34.7
26.5
37.0
34.9
37.2
37.9
Urban (n=79)
Rural (n=112)
Reservation (n=71)
TOTAL (N=262)
Math
NCE
29.6
33.2
30.5
32.6
37.8
36.2
30.0
27.5
27.3
30.9
33.6
32.1
Urban (n=80)
Rural (n=112)
Reservation (n=71)
TOTAL (N=263)
FY 1988-89
FY 1989-90
FY 1990-91
* n's vary slightly by year and by subtest

ITBS/TAP NCE scores were also examined in relation to grade equivalent (G.E.) scores. This analysis showed that students made steady developmental progress from grade-to-grade. However, the question was posed: "What kind of progress is being made?" Table 4-22 shows the median and range for grade equivalent scores by grade level using FY 1990-91 data. Using the median (which indicates the grade equivalent at which 50 percent of the students score below and above), a majority of students in general demonstrate skills "below" grade level. Range scores, however, revealed variations in individual skill levels showing that there *are* students performing at or above grade level.

Table 4-22

FY 1990-91 GRADE EQUIVALENT ITBS/TAP SCORES FOR 7-12 COHORT (N = 264)

FY 1991 Grade Levels*	Reading G.E.			Language G.E.			Math G.E.		
	n	Median	Range	n	Median	Range	n	Median	Range
8th	78	6.8	3.4-19.8	78	6.8	4.1-19.5	81	7.2	5.0-19.2
9th	74	7.8	3.0-14.7	75	7.9	4.2-14.4	76	7.6	3.6-13.2
10th	34	7.6	3.6-16.2	34	8.1	4.0-14.0	35	7.8	4.9-16.2
11th	42	8.2	3.7-17.1	43	9.9	4.2-14.0	43	8.1	4.8-14.0
12th	24	10.3	7.0-14.4	24	9.9	6.0-13.5	24	8.7	5.0-15.8

* Each designated grade level represent a subgroup of the cohort for whom three years of data were available. Therefore, 1991 eighth graders were 1988-89 sixth graders and 1990-91 seventh graders, and so on.

An additional analysis of TAP scores considered the exit skills of high school seniors. Twelfth grade NCE results were compared for two consecutive years. The hypothesis was that changes in twelfth grade students' scores *might* reflect changes as a result of program participation (even though there are other variables which contribute to such changes). Figure 4-5 depicts trends in twelfth grade performance.

Figure 4-5

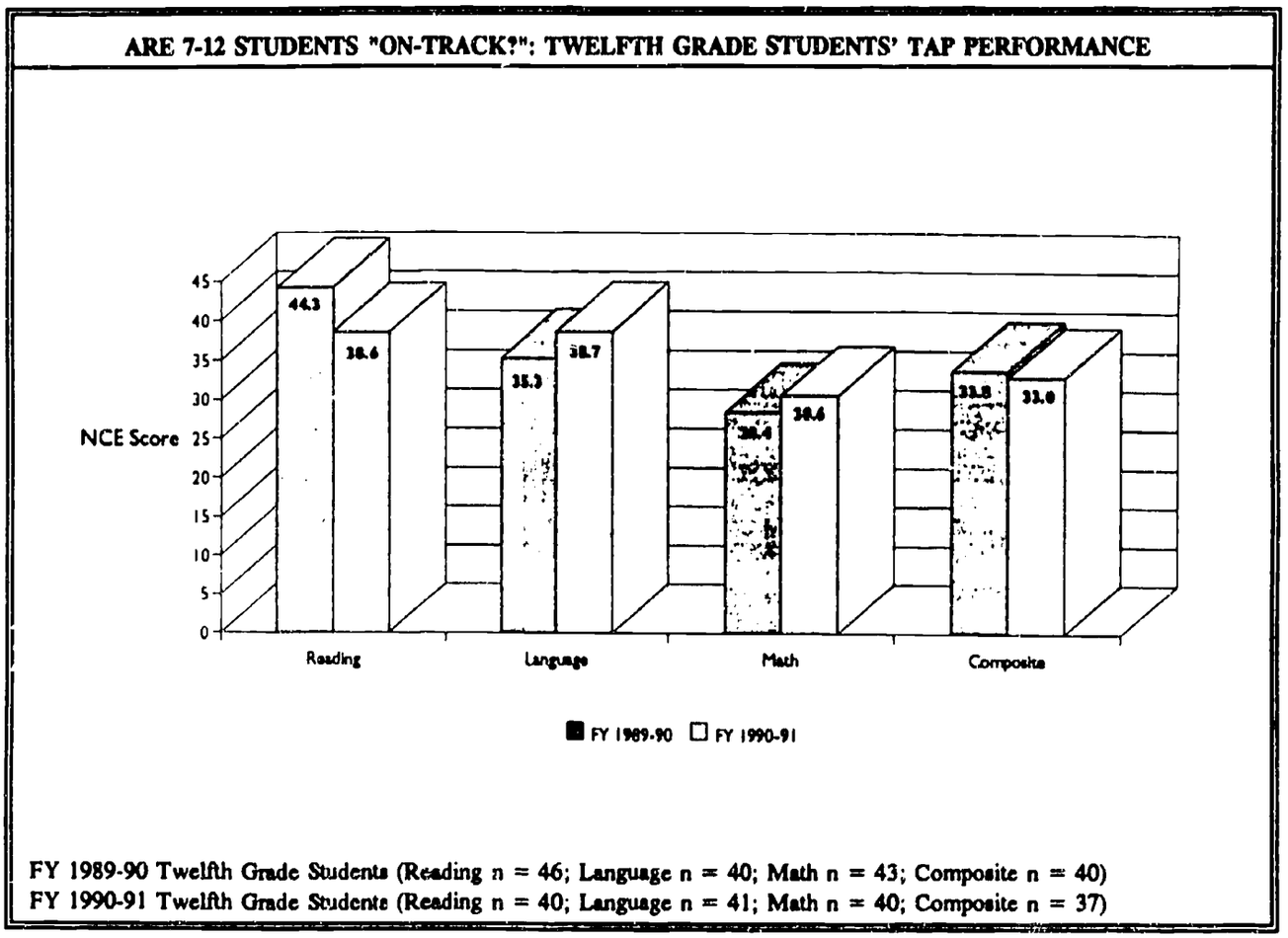


Figure 4-5 shows that on the composite, consecutive groups of seniors performed at similar levels. However, recent FY 1990-91 graduating seniors exited with higher level language and math skills, and lower reading skills, than their predecessors.

7-12 Credits Earned: As explained in the *Arizona At-Risk Pilot Project FY 1989-90 Project Report* (Bierlein et al., 1990), 20 credits are required by the state for graduation, and therefore, five credits is the "average" number of credits needed per year for four years of high school. For all students for whom data were available for both FY 1989-90 and 90-91, *a little over one-third of the students (34.6 percent) earned five or more credits; two-thirds (63.6 percent) earned less than 5 credits.* Analyses next focused on examining the percentage of students by grade who were "on-track" regarding credits earned. This analysis is presented in Table 4-23.

Table 4-23

9-12 CUMULATIVE CREDITS EARNED (as of FY 1990-91)						
Grade	< 5 credits	5-9.5 credits	10-14.5 credits	15-19.5 credits	> 20 credits	% "on-track"
9th (n=185)	49%	48%	3%	<1%	<1%	51%
10th (n=138)	10%	46%	35%	7%	2%	44%
11th (n=55)	4%	13%	38%	31%	14%	45%
12th (n=68)	0%	3%	12%	15%	71%	71%

Table 4-23 indicates that a little less than half of students grades 9-11 *were* "on-track" in accumulating an average of five credits annually, while 71 percent of grade 12 students accumulated enough credits to graduate. The shaded area in Table 4-23 indicates those students who *were not* on track, and might be considered "overage" going into the next grade.

District Self-Reported Outcomes: Morrison Institute encouraged all districts to submit self-evaluation data, and eight of the 21 program sites (38 percent) took advantage of this opportunity. The following discussion is *not* a comprehensive report of all district self-evaluation efforts. Rather, it illustrates some of the types of self-evaluation being conducted.

Case Study #1: This rural district offered both an alternative school for students in grades 7-12, and a school-within-school (SWS) intervention program aimed primarily at seventh and eighth grade students. Comprehensive district evaluations were conducted regarding student enrollment, credits earned, and student attrition. Follow-up studies were also completed on all students. Computer-assisted instruction was an integral part of the services provided, and a separate evaluation of student lab usage and outcomes was conducted. During FY 1990-91, special emphasis was placed on offering vocational services to SWS students and an evaluation was also completed of this component.

Evaluation results indicate 213 (74 percent) of the 287 "potential dropouts" enrolled in both programs remained in school and earned a combined total of 492 credits, averaging B to B+ grades. The evaluation of the computer lab revealed a significant increase in usage and numbers of credits earned--particularly in mathematics. In fact, pre- and posttest for students receiving CAI in math revealed an average grade level increase of 1.54. Regarding this outcome, the district concluded: "This is exciting in light of the fact that several of the students were having difficulty answering even the most basic problems...at the beginning of the year." In citing specific accomplishments of alternative education students in this program, it is noteworthy that: *one of four valedictorians was an alternative education student; seven of 18 honor students were in this program; 10 students received scholarships; one was inducted into the National Honor Society; and 15 others received awards in other subject areas, including one State Writing Contest winner.*

Case Study #2: This urban district offered discrete components in each of the three areas targeted for intervention: academic, vocational, and support. Although evaluation data were submitted in several areas, this case study focuses on the vocational aspect of the program. District results indicated that following career awareness instruction provided at five secondary schools, 21 students were subsequently

trained and placed through the Work Experience Program. These students were evaluated through regular contact reports, student self-reports and employer evaluations. The district concluded:

> *"It is evident...that the job placement component is viewed extremely positively by both the participating students and their employers. Students value the excellent preparation for the transition from school to the work place which increases their motivation to stay in school and study harder. Employers are enthusiastic in regard to 11 job-related skills and attitudes, such as attendance, punctuality, initiative and positive attitudes toward work and fellow workers."*

Case Study #3: This rural district examined changes in student self-esteem, and work-related behaviors and attitudes as a result of guidance counseling. Pre- and posttest results were available for 113 students regarding self-esteem, and for 32 students regarding career attitudes. The district indicated that:

> *"Significant growth occurred in almost all areas [and] demonstrate the effectiveness of the [program]."*

Case Study #4: Unique among the project, the Pima County Detention Center documented its student population and outcomes perhaps more than any other at-risk pilot site. This program served 1,063 students during FY 1990-91. To illustrate how the center functioned as a "dropout interdiction" program, data were tabulated for students entering the detention center from two local school districts. The project director reported that:

> "...out of 341 students, 281 were retrieved [dropouts]. This mean that after departing detention, 281 students followed one of the following tracks: 1) they reentered their home school (60 percent of all students in program will return to their home school) as a condition of their release; 2) they entered a court-related program or a community-based program that had an educational component in place; 3) they were released to Department of Corrections which has a continuing education program."

Furthermore:

> *Before [this program], these students were ignored educationally. Even worse, students who were enrolled in schools became dropouts after 10 days...[this program] has remedied this situation and has raised the consciousness of the juvenile court and made them more aware of their responsibility to address detained youths' education needs...."*

7-12 PROGRAM EVALUATION CONCLUSIONS

PROGRAM IMPLEMENTATION CONCLUSIONS

A comparison of survey ratings on implementation success/barriers, open-ended comments, interview data, and administrative turnover yields several recurrent concerns:

- Poor/inadequate communication has adversely affected program implementation.

- Coordinating/integrating programs has been problematic; establishing school-community collaboration is an issue still to be addressed, particularly for rural and reservation programs.

• Unreliable funding and inappropriate funding cycles have created difficulties implementing programs as planned.

• Qualified and committed staff can either "make or break" a program; adequate and appropriate staff training is required to produce qualified staff and update existing staff.

• Strong program leadership and administrative support are essential for program success; the lack of stable leadership in rural and reservation areas is, therefore, cause for concern.

Although there are some concerns regarding program implementation, it is important to recap the following *positive* findings as well:

• Programs, in general, have been implemented as planned; they served an estimated 9,385 students, established communication with over 1,500 parents and offered specific services to many others, and provided staff training for personnel at all 21 program sites.

• Of 15 factors identified as affecting program implementation, a majority (60 percent) were generally perceived by staff as contributing to successful implementation.

• Responses to open-ended questions revealed more positive than negative comments regarding programs.

• Interviewees generally felt that their programs were implemented successfully.

PROGRAM SERVICES CONCLUSIONS

Student Services

Analyzing teacher and student survey ratings, open-ended comments, and interview data, the following conclusions are derived regarding student services:

• Statistical and qualitative differences appeared among *all surveyed* 7-12 staff when data were analyzed by region, grade level, role, and level of program awareness. Insofar as these differences indicate factions among the staff, there appears to be little consensus as to "what works" specifically for at-risk youth.

• *Alternative programs* hold promise as a *delivery system*; however, to be accepted and "credible," attention must be paid to the quality of the curriculum, program standards, and communication efforts to convey program quality to non-program staff.

• Aggregate staff survey results suggest a preference for delivery systems offering "traditional" courses of study supplemented by discrete *program components;* in contrast, program staff and students prefer more holistic *delivery systems*.

• There is strong consensus that for programs to be successful, staff must be committed to providing individual attention and students must feel cared about.

• *Academic/instructional services* are positively perceived across 7-12 at-risk programs; however, teachers and students do not agree on preferred instructional strategies.

• Students and program staff involved with vocationally-oriented activities perceive them quite positively. However, *vocational services* were limited in range and accessibility, especially at the 7-8 grade levels.

• *Social/support program components and services* are valuable elements of at-risk programs, but *more services* and *additional qualified* personnel are needed, as are more linkages with outside agencies.

Parent Services

Regarding parent services, several conclusions can be drawn:

• Parent services are weak at the 7-12 level apparently because parent involvement was not an emphasis of 7-12 at-risk programs and because 7-12 staff held mixed opinions on the importance of parent involvement.

• Of the parent involvement activities that *were* implemented, social events and efforts to reach parents individually are perceived as most effective.

• Support services extending to families of at-risk youth (e.g., family counseling; home visits) hold promise as "effective" strategies for involving parents, but they need to be expanded.

Staff Services

Staff surveys, in conjunction with interview and external evaluation data, suggest the following conclusions regarding staff services:

• Program staff, particularly in the urban areas, appear most satisfied with staff training opportunities. Better opportunities need to be made available for all program *and non-program* staff, particularly in the rural and reservation areas.

• Staff need more training regarding specific strategies for working with at-risk youth.

• Conferences and formal classes are preferred training methods; access to formal classes is limited and problematic for staff in isolated, rural, and reservation areas.

PROGRAM OUTCOME CONCLUSIONS

A comparison of teacher and student perceptions of program/student outcomes, student outcome data, and district-reported data, in conjunction with a study on student mobility, indicates the following:

• School-year reports indicate that nearly 89 percent of the students participating in the 7-12 at-risk programs stayed in school or graduated; less than 3 percent were verified dropouts during FY 1990-91. Multi-year reports indicate that 56 percent of the students tracked over time stayed in school or graduated, while only 15 percent were verified dropouts.

• Student attrition, particularly during summer months, causes great difficulty in tracking at-risk students. This, in turn, clouds the issue of student *transience versus dropouts* at the upper grade levels.

• Staff and students agree that the greatest program impacts are: improving students' self-esteem and increasing their achievement.

• Staff believe that they are keeping students "on-track" toward graduation, but some feel that they are simplifying the curriculum in order to do so.

• Students in alternative schools are most positive about their program experiences; however, each type of program appears to be accomplishing its primary goals.

• In FY 1990-91, absenteeism decreased for the first time since the inception of at-risk programs. This implies that at-risk youth received "additional" instructional days.

• *For the teenagers represented by the 7-12 cohort:* 1) ITBS/TAP NCE results show relatively stable performances in reading and math, and an overall trend toward increased language skills.

• *For the teenagers represented by the 7-12 cohort:* 1) ITBS/TAP NCE results, when converted to grade equivalent scores, show that students are making steady developmental progress; however, a majority of students remain "below" grade level.

• *For consecutive groups of seniors represented by the 7-12 cohort:* TAP NCE results show that FY 1990-91 students are exiting with higher language and math skills and lower reading skills than their predecessors, but overall performance has remained stable between years as reflected by the composite scores.

• Results indicating net gains in language are encouraging, as these skills are correlated with academic achievement; low reading levels, however, are cause for concern--particularly among reservation youth.

• A majority of at-risk students *are not* earning an average of 5 or more credits per year.

• A majority of at-risk students in grades 9-11 *are not* "on track" regarding cumulative credits earned; however, 71 percent of the twelfth grade cohort students earned sufficient credits to graduate.

• District-specific outcome data suggest positive impacts from programs and also illustrate the importance of locally-conducted evaluations in portraying specific program effectiveness.

Chapter 5

AT-RISK PILOT PROJECT BUDGET BREAKDOWN

During FY 1990-91, $5.5 million was available to support the K-3 pilot project while $2.2 million was available for the 7-12 project. Specific grant awards ranged from $13,745 to $270,686 for the individual K-3 programs, and $75,000 to $256,425 for the 7-12 programs[24]. During 1991, S.B. 1079 provided an additional transition year to the project, established a Joint Legislative Study Committee, and required an analysis of how program funds were expended. Specifically, the bill required a study to:

> "examine the amounts spent during fiscal year 1990-91 for various program activities... Any funding method that is determined for meeting the needs of preschool through twelfth grade at-risk pupils shall be designed to limit those costs that are associated with activities that are administrative and that do not provide direct services to pupils, parents or teachers."

An independent budget study was therefore undertaken by Morrison Institute as an adjunct to the original evaluation study. The specific types of budget data to be collected, and the data collection format, were determined in collaboration with several pilot districts. The intent of the budget study was *not* to conduct a cost/benefit analysis, but rather to describe by category how funds were spent by pilot programs during FY 1990-91. Budget data were requested from all at-risk programs, with data analysis focusing on four key questions:

1. How much of the at-risk funds were spent on direct services to students, parents, and teachers?

2. What percentage of total district maintenance and operations budgets did FY 1990-91 at-risk funds account for?

3. What was the average cost per pupil, and what were the ranges of cost per pupil, based on total at-risk funding expended?

4. What is an appropriate level of funding to meet the needs of at-risk students?

BUDGET ANALYSIS AND RESULTS

This section highlights budget data results for K-3 and 7-12 programs. Data were examined in several ways (i.e., including and excluding carry forward monies; by phase; by size of district; by region; and as an aggregate). In examining information related to cost per pupil, it is important to remember that some variation exists between programs in reporting the number of students served. For example, programs that incorporated the use of classroom aides or developmentally appropriate practices typically counted all students as receiving those services, whether or not they were identified as at risk. Therefore, those districts showed a large number of students served and a relatively lower cost per pupil than programs reporting a more specifically targeted group of at-risk students. The methodology for and limitations of budget collection efforts are described in Chapter 2 and Appendix D of this report.

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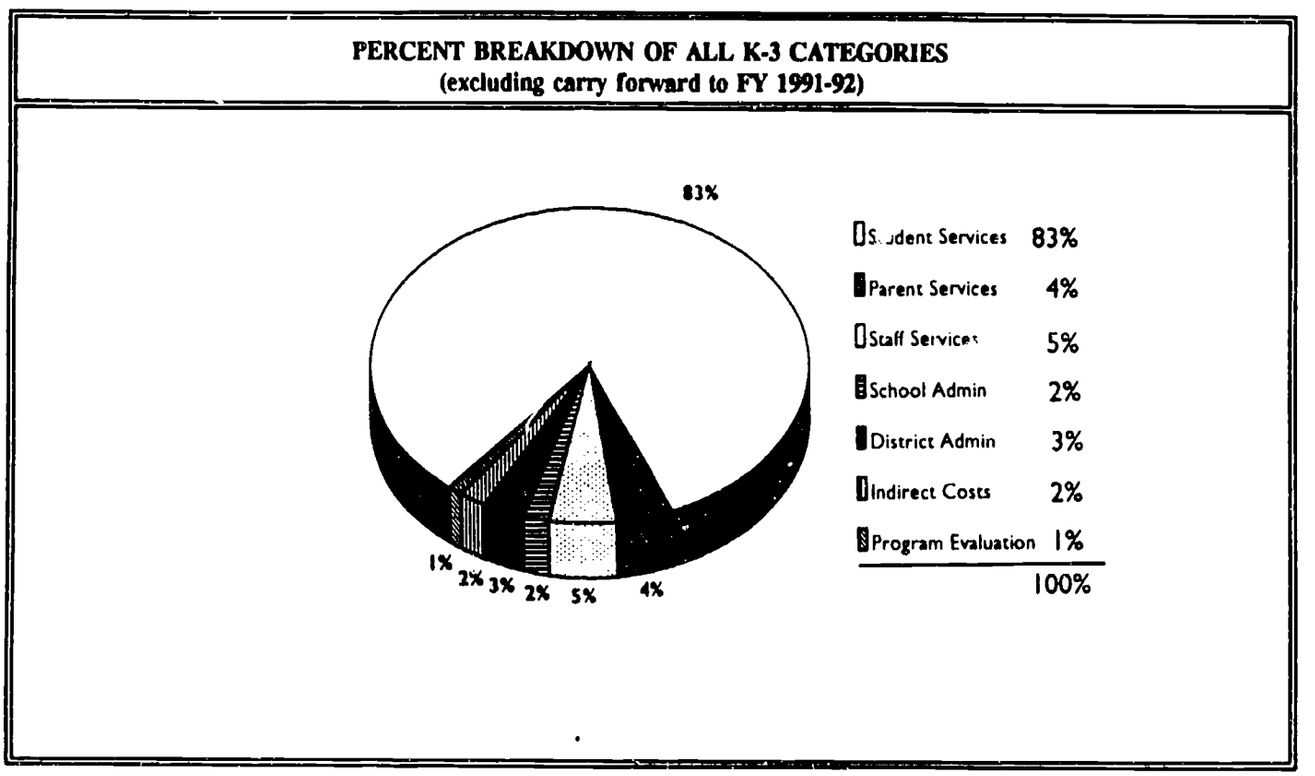
[24] The actual amount of K-3 grant funding available during FY 1990-91 was greater than these figures since most programs had carry forward monies from the previous year; the range listed for the 7-12 programs already included the previous year's carry forward funding.

K-3 PROGRAM BUDGETS[25]

An analysis of program expenditures for FY 1990-91 by function reveals that, of *total* funding amounts, 69 percent was spent on direct services to students, 2 percent on services to parents, and 4 percent on services for staff; 8 percent went to administrative, evaluation, and indirect costs; and 16 percent was carried forward to FY 1991-92. Data revealed that six of 22 Phase I programs (27 percent), and eight of 13 Phase II districts (62 percent), carried forward at least 20 percent of their funds.

When the 16 percent carry forward is excluded, the remaining funds represent total funds *actually expended* in FY 1991-92. As illustrated in Figure 5-1, 83 percent of funds were expended on direct student services, 4 percent on parent services, and 5 percent on staff services. The remaining 8 percent was spent on school and district level administration, evaluation, and indirect costs. Budget expenditures by individual program, with breakdown by function, are presented in Appendix C, Table C-1.

Figure 5-1



At-risk funding levels also were examined relative to each district's total maintenance and operations (M & O) budget. Budgets from a sample of districts, representing a range of funding levels, district size, and regions, were calculated as a percent of total district M & O budgets[26]. Results of this analysis revealed that, for the vast majority of K-3 districts, the at-risk pilot funding represented only

[25]Forty of 42 districts were included in the data analysis: one district did not submit data in time to be included in the analysis, while one district failed to submit any budget data at all.

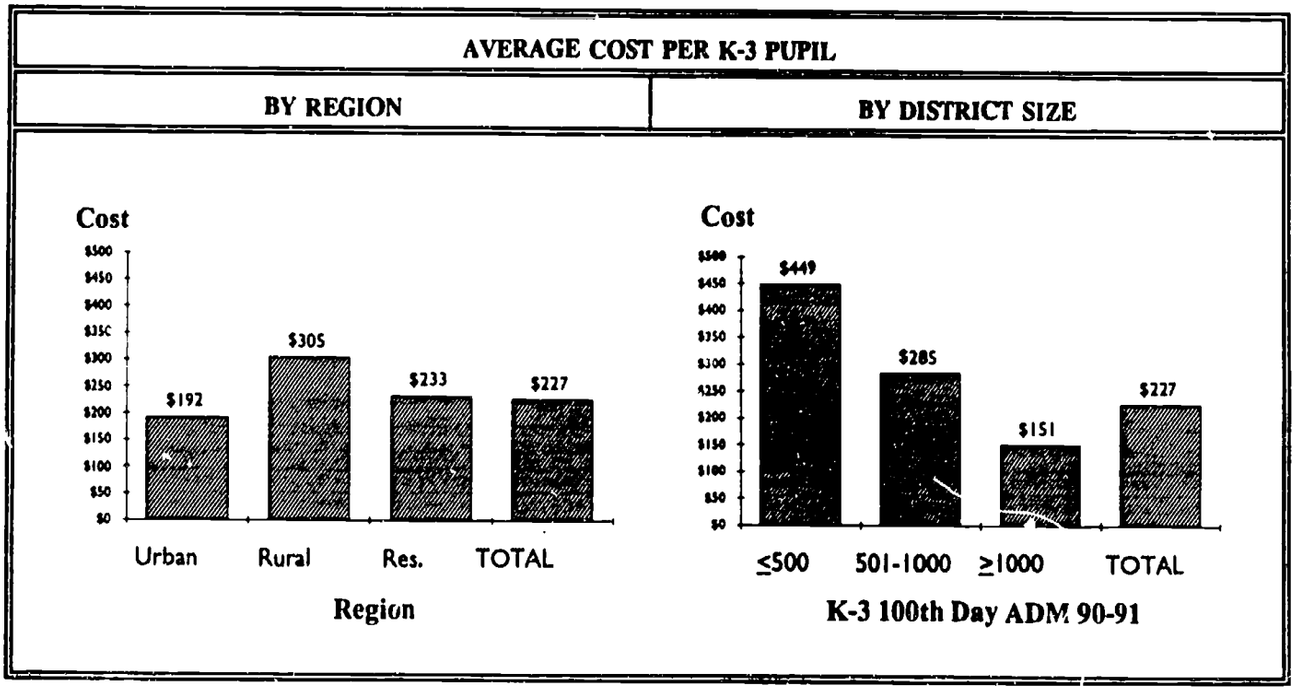
[26]Budget figures were obtained from "Statistical and Financial Data for Fiscal Year 1989-90," Arizona Department of Education, December 1990. This analysis used grant amounts for FY 1989-90 since state data on total district M & O figures were not yet available for FY 1990-91.

slightly more than 1 percent of their total M & O budget. In two small districts, however, at-risk funds accounted for 7 percent and 10 percent of the total M & O budget.

Appendix C, Table C-2 contains a compilation, by region, of data gathered from districts including: 100th day average daily membership (ADM) for K-3 students; total number of students served as reported by districts; total budget for direct student services; cost per pupil based on direct student services expenditures; total program budget (excluding carry forward); cost per pupil based on total dollars expended. *Based on expenditures for direct student services only*, the average cost per pupil was $189. When *total* budget expenditures were used, the cost per pupil was $227, with a range from $76 to $2840 per pupil.

Phase I and phase II districts had similar costs per pupil. When expenditures were analyzed by region, however (see Figure 5-2 below), it was found that rural programs had the highest per pupil cost ($305), followed by reservation programs ($233) and urban programs ($192). It is important to note, however, that while rural and urban areas had the same number of funded projects (14 each), rural pilot sites were smaller and therefore had far fewer students to serve (14 urban projects served 12,772 students, while 14 rural projects served 5,328). Thus, a higher cost per pupil would be expected. When the data were analyzed by size of district (as determined by 100th-day K-3 ADM for 1990-91), a similar pattern emerged. Small districts (ADM $\leq$ 500) spent an average of $449 per pupil; medium districts (ADM = 501-1000) spent an average of $285 per pupil; large districts (ADM > 1000) spent $151 per pupil.

Figure 5-2



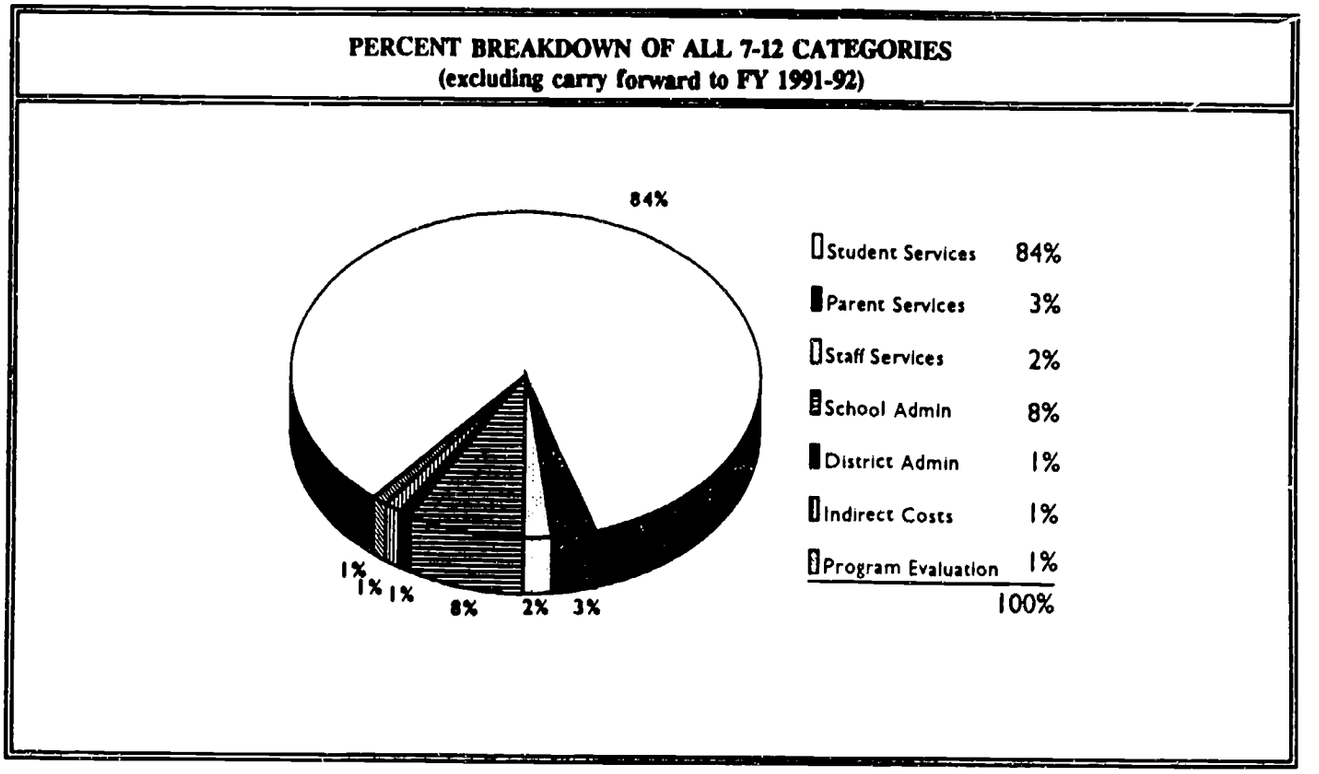
Programs that expended a large number of dollars per pupil did not necessarily offer a large number of services. In fact, the number of program services offered was about evenly distributed across programs regardless of cost per pupil expenditure. More important than the *number* of services offered is the *intensity* and relative *effectiveness* of those services. For example, a highly focused one-on-one tutoring program is more costly, but has a large achievement effect on only a small number of students.

By contrast, a strategy such as the implementation of developmentally appropriate practices is much less costly on a per pupil basis because it affects a large number of students (i.e., all students in the classroom or the school). To summarize, strategies that focus individual attention on a small number of students are more costly but possibly more effective. Examining the relative effectiveness of specific strategies will be a focus of the year four evaluation study.

7-12 PROGRAM BUDGETS

All 13 7-12 programs were included in the budget analysis. Budget expenditures by individual program, with breakdown by function, are presented in Appendix C, Table C-3. With carry forward included, 84 percent of funds were expended on direct student, parent, and staff services. With carry forward excluded, 89 percent of funds were expended on these services, and the remaining 11 percent was allocated to administration, evaluation, and indirect costs, as shown in Figure 5-3 below.

Figure 5-3



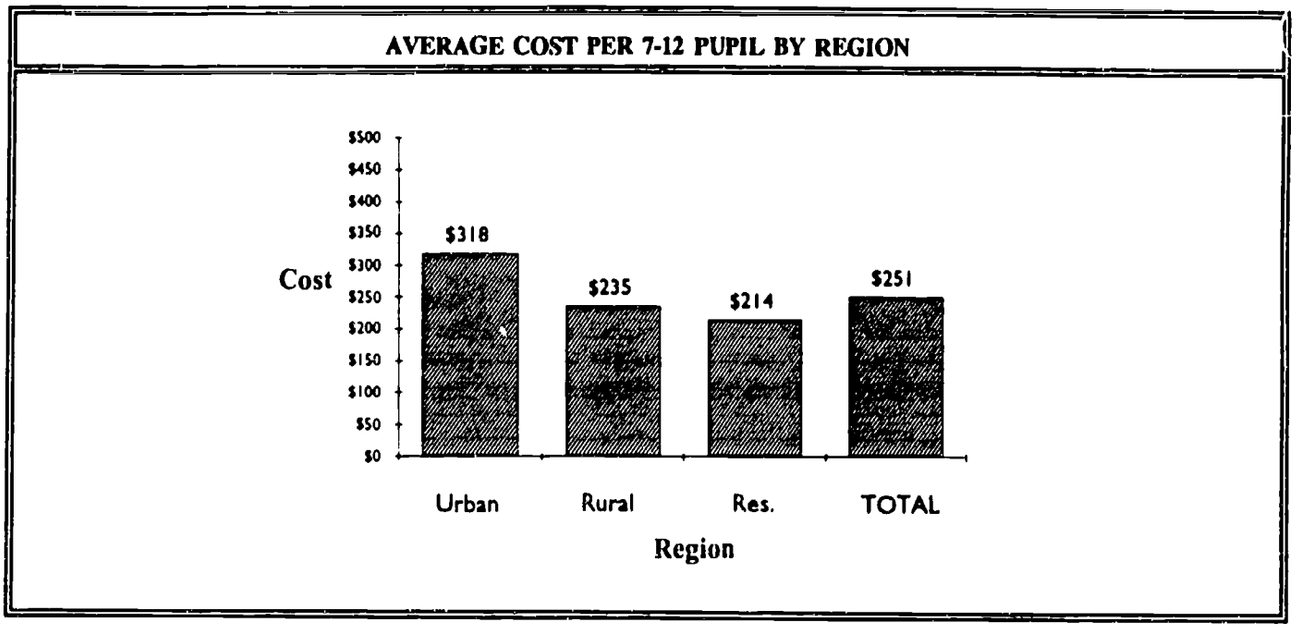
As with the K-3 programs, 7-12 funding was calculated as a percent of total district M & O budgets. The funding level for 7-12 districts was found to be slightly higher than for K-3 programs, with the majority of at-risk funds constituting between 2 and 3 percent of total M & O funds.

The compilation of data on total number of students served, expenditures for direct student services, total expenditures, and costs per pupil for 7-12 programs is shown in Appendix C, Table C-4). Using expenditures for *direct student services only*, the average cost per pupil was $211. When *total project expenditures* were accounted for, the average cost per pupil was $251, with a range of $76 to $2648. Again, higher costs per pupil typically signified more intensified services for relatively fewer students rather than simply more services. Among 7-12 districts, for example, programs offering

alternative schools generally had a higher cost per pupil than those offering interventions within the regular education program that reached more students.

The regional breakdown for 7-12 programs, shown below in Figure 5-4, reveals a different pattern from the K-3 programs. Urban districts showed the highest per pupil expenditure at $318, followed by rural districts at $235 and reservation districts at $214. The budget data for 7-12 were not analyzed by district size due to the diversity of grade levels being served (i.e., some served 7-12, some 7-8 only, and some 9-12 only), and the diversity of programs offered (e.g., a county detention center; a consortium of nine districts).

Figure 5-4



DISCUSSION AND CONCLUSIONS

The results show quite clearly that the vast majority of at-risk grant funds, both at the K-3 and the 7-12 levels, were expended on direct services to students, parents, and staff, with relatively small percentages allocated to administrative and indirect costs. Although there was a wide range from program to program in costs per pupil, the majority of programs clustered around the average cost per pupil ($225 for K-3; $251 for 7-12). As would be expected, the strategies that required low student-staff ratios were more costly. Regional and size differences at the K-3 level presented an interesting perspective on "economies of scale." Programs in rural areas or in districts with low ADM's (often the same districts since rural districts tend to be small) had substantially higher per pupil costs, even though many small rural programs served their entire K-3 populations. Site evaluators and district staff reported that when these districts first developed their programs they were already behind urban districts in terms of availability and accessibility of resources (e.g., instructional materials, facilities, teacher training), thus adding to their per pupil costs.

It is interesting to note the difference in per pupil spending patterns shown for 7-12 programs, especially the finding that urban districts had the highest cost. This may be explained by the fact that secondary schools tend to be about the same size regardless of their regional location. Therefore, the

factor of very small schools/districts that exists at the elementary level probably is not a factor at the secondary level.

K-3 programs spent a surprisingly small percentage of monies (4 percent) on parent services, considering the wide range of services offered by most programs. It should *not* be inferred from this, however, that these services are not costly. Most parent services, actually, were funded by other district sources. In addition, many parent services relied on the human resources already available in the districts. For example, teachers made more home visits and more personal parent contacts as part of their normal job requirements, and without additional compensation. Whether duties such as making home visits should be an integral part of a teacher's job responsibilities is an issue that warrants further examination. Other services such as holding parent meetings and encouraging attendance at school events appeared to rely more on staff energy and ingenuity than on funding per se.

The amount of funding carried forward to the next fiscal year, and the associated funding policies, require some scrutiny. K-3 funding was structured so that programs retained carry forward funds in their district budgets to spend the following fiscal year. One-third of all K-3 districts carried forward 20 percent or more of their total funding amount from 1990-91 to 1991-92. Follow-up phone calls to project directors revealed that several districts used the previous year's carry forward to fund summer school or summer in-service activities held in July and August. In other cases, the funds were held in reserve for services to be offered the following year or simply were not expended by the end of the fiscal year.

At the 7-12 level, however, no districts carried forward 20 percent or more of their funds, and the majority had no carry forward funds at all. This difference existed even though 7-12 districts were funded at a slightly higher level in terms of percent of their total district budgets. Under the 7-12 funding structure, however, districts were required to turn back monies not expended, and these funds were then re-allocated the next year. In other words, "if they didn't use it, they could lose it."

When writing their initial grant proposals and funding requests, schools and/or districts had a great deal of discretion in defining their target populations (i.e., the total number of students they hoped to serve through the at-risk program). Theoretically, an "appropriate" level of funding per at-risk student could be derived from the average costs actually incurred by these programs, for if costs were significantly higher than the average expenditures, programs could have chosen to serve fewer students. If this were the case, an "appropriate" level for K-3 programs would be $227, while the amount would be $251 at the 7-12 level. However, other information has revealed that many of these programs (particularly the rural programs) had very limited resources available for at-risk programming prior to this grant. As a result, many programs attempted to provide at least *some* additional support to a larger group of students, not necessarily an "appropriate" amount of support. Plus many programs felt compelled to serve large numbers of students since evaluations in the past have frequently focused on quantity, not quality. Finally, interview data revealed that within many of the more "targeted" programs, funding limitations prevented them from being able to serve all students identified as needing these more comprehensive services.

Moving beyond the context of Arizona's pilot programs, several recent at-risk initiatives within Kentucky offer a good point of reference for funding comparisons since this state's student population size and free/reduced students percentages are fairly similar to Arizona's. Kentucky's *Educational Reform Act of 1990* added an at-risk funding weight of 0.15 per student eligible for the federal free lunch program ($328 per student during FY 1990/91). In addition, separate funding was provided to support *Family Resource Centers* for every school that has at least 20 percent of their students meeting the free lunch criteria. Funding for these centers was based on $200 per eligible student, within a range of

$10,000 to $90,000 per center. In addition, separate funding is provided for teacher training ($25 per student).

Using the Kentucky numbers as a guide, one can surmise that an "appropriate" funding level per at-risk student for Arizona would be higher than the average spent by the pilot at-risk programs. This is especially true if the goal is to not only address the academic concerns of at-risk students, but also to address the parental and social service issues. Evaluation results have illustrated that Arizona's pilot programs generally were able to focus on academic concerns, but most were unable to provide effective staff development activities and offered very little in the way of social service coordination. In Kentucky, policymakers choose to provide several separate funding streams to address these various issues. Arizona may wish to consider something similar, or should consider adopting an at-risk weight adequate to cover all aspects of at-risk programming[27].

Keeping in mind the four key questions posed at the beginning of this chapter, the following conclusions can be drawn regarding at-risk funding:

- 92 percent of the at-risk funding at the K-3 level and 89 percent at the 7-12 level was expended on direct services to at-risk students, their parents, and the staff who teach them. Central office administrative costs represented 1 percent at the K-3 level and 3 percent for 7-12 programs--the remainder was used for school-level program coordination, evaluation, and indirect costs.

- At-risk funding accounted for about 1 percent of the total district M & O budgets at the K-3 level, and about 2 percent at the 7-12 level.

- The average cost per pupil for K-3 programs was $227, with a range from $76 to $2840. The average cost per pupil for 7-12 programs was $251, with a range from $76 to $2648. The majority of programs at both levels clustered around the average.

- An "appropriate" funding level per children should be *no less* than the average expended per student by these pilot programs. Dependent upon the expectations for training, parental involvement and social service coordination, the amount should be higher than the average (e.g., during FY 1990-91, Kentucky provided $528 per free lunch student--$328 in the formula for general programming and $200 for Family Resource Center support).

- Given that it is more expensive for small/or rural districts and schools to provide services to at-risk students, it is suggested that, in addition to a "base" weight, additional funding should be provided to small and rural schools, and for those programs that wish to develop more comprehensive services such as alternative schools. Further, a minimum amount (e.g., $5,000-$10,000) should be considered for all except the very smallest of schools. Without some minimum amount it becomes impossible to "purchase" additional personnel (and/or stipends for existing personnel) to provide the individualized support found effective with these at-risk students.

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[27] It should be noted that recommendations contained within the Governor's Task Force on Educational Reform (as of October 1991) have generally embraced the concept of several funding streams. This group has recommended the establishment of an at-risk funding weight, the provision of funding to establish a statewide parent training program, the creation of Family Resource Centers, and the provision of funding for teacher training. In addition, a variety of other at-risk initiatives are also recommended (e.g., preschool, prenatal, guaranteed scholarships).

Chapter 6

SUMMARY AND RECOMMENDATIONS

This third annual report has identified: 1) the *general* types of practices that hold promise for meeting the needs of at-risk students, and 2) the implementation processes that allow such practices to flourish. Thus far, the report has presented an extensive and detailed analysis of data related to the evaluation of the *Arizona At-Risk Pilot Project*. Specific strategies implemented within particular programs will be examined in depth during FY 1991-92 and reported in a "what works" document at the conclusion of the four-year study.

This chapter synthesizes evaluation results with current educational research and presents the most consequential implications for developing policies and long-range plans affecting at-risk students. Information gathered during meetings with K-3 and 7-12 project directors in September 1991 is incorporated. During these meetings, formal discussions focused on generating solutions to identified problems including program communication, staffing, planning, and developing coordinated programs in concert with social service agencies. Finally, the chapter poses recommendations as they apply to one or more levels within the educational system: the classroom/school, local, and state levels.

SUMMARY

K-3 PROGRAMS

Given the characteristics of K-3 at-risk children, descriptions of program strategies designed to meet their needs, and the summary of evaluation activities and results, a picture of at-risk children and programs emerges as discussed below.

• The K-3 at-risk pilot programs, as a whole, have had a positive impact on the lives of at-risk students and parents.

Arizona's K-3 at-risk pilot programs have implemented a number of educational alternatives to help children at risk of academic failure. Since their implementation, there has been a steady decrease in the number of children retained within pilot sites. Additionally, attendance has been on the rise and net ITBS gains have been witnessed in language and reading--with third grade students exiting at higher skill levels than their predecessors. Consistently, staff and parents have praised their school's efforts to give more individual attention to students and parents alike. Staff have increased their awareness of appropriate instructional strategies for working with at-risk (and all) youngsters. Schools have received much-needed funding to add staff and purchase supplies and materials to enrich their students' educational experiences. Greater numbers of parents have begun to play a role in the educational system--some coming to school for the first time since their own adolescence. And, there has been greater accountability among these sites than ever before.

Schools have done much to improve the educational environments of at-risk children; unfortunately, they cannot make "at-riskness" disappear because children are at-risk for reasons that are largely environmental and outside the scope of school. There are still barriers to overcome and progress to be made. For example, children need to exhibit greater skills in all areas, particularly math, to advance at grade level. Schools need to address philosophical differences regarding retention and "social

promotion." Parents of at-risk youngsters need to become involved to a greater extent in the educational process. Schools need to establish more collaborative partnerships with social service agencies, and make greater efforts to reach out to parents and community members. Staff must continually upgrade their skills and keep abreast of the latest research and technology that will enhance their abilities to increase individualized instruction.

At-risk children have shown progress within the context of the Arizona At-Risk Pilot Project. Additional progress is dependent on continued support at the state and local levels.

- **Consistent descriptive and statistical differences suggest that at-risk children, programs, and staff vary regionally.**

Arizona's **reservation** at-risk children are affected by more at-risk factors than are children in other regions. ITBS scores for a select group of these children suggest that reservation at-risk pupils score lower on these tests than do their rural and urban peers; likewise, absentee rates are consistently higher. Key program staff turnover is higher than in other programs, and staff working in reservation districts consistently rate the effectiveness of services (for students, parents, and staff) and outcomes less positively than do their colleagues.

The isolation of these districts compounds their problems. Parent involvement is difficult, given that many parents do not have telephones or access to transportation. Unemployment may also be a factor contributing to a lack of parent involvement. Staff qualifications pose particular problems, both in recruiting qualified staff and keeping them once trained. Providing appropriate training is also problematic since it is difficult and costly to recruit qualified trainers to provide on-site in-service; it is equally demanding and costly to send staff to other locations for training. Social service linkages are hard to establish because of the tremendous demands on those services and the tribal infrastructure governing most of these services.

Nevertheless, reservation programs are piloting intervention strategies that hold promise, and at-risk children are progressing developmentally. "Language-rich" classrooms and programs emphasize literacy skills; full-day kindergartens and smaller student-adult ratios help to provide extra and more individualized attention to meet childrens' academic needs. One district sends tape-recorded books home with children, who sometimes listen to the stories on their long bus rides home. An additional benefit of this practice is that parents are encouraged to listen to (and read) these books as well. Another district utilizes cross-grade tutoring integrating instructional and recreational activities. In many districts, parents are enticed to school through social events, and more efforts are being made to conduct home visits. Finally, through additional training, staff are increasingly aware of the educational and cultural needs of their student populations.

Rural at-risk children in Arizona live between two worlds. They have the isolation of small communities, yet access and exposure to metropolitan areas. In virtually every data set, rural at-risk children fall in the middle of the extremes represented by reservation and urban children. Rural children appear at-risk primarily due to poverty and the conditions that accompany being poor--a lack of educational/reading materials, substandard living conditions, parents who work and therefore are not home after school contributing to the latch-key status of many rural children. As with reservation districts, rural isolation appears to exacerbate low parent involvement and difficulties recruiting and keeping qualified staff and administrators.

Unlike reservation areas, however, rural communities are increasingly becoming the "crossroads" linking metropolitan areas. Therefore, rural areas are being increasingly exposed to problems more symptomatic of urban areas. For example, one rural community was described as the "drug connection" between Tucson and Phoenix, and one at-risk third grade student was "busted" for pushing drugs on behalf of his gang member parents.

Rural staff perceive moderate success in their programs, but they--like their colleagues--*are* beginning to make a difference. And, *more* than their urban and reservation colleagues, they are optimistic that their efforts to reach parents are paying off. Classes for parents (e.g., ESL and G.E.D.) appear particularly promising in these areas, in addition to school social events and better communication. Moreover, social services are perceived to be stronger than in the other two regions. Notably, more rural districts have piloted "Family Resource Centers" which, in addition to serving children through after-school activities and tutoring, also offer parents such services as crisis counseling, prenatal care classes, and free legal advice. One center even obtains day-old bread for free distribution. Other schools have implemented "clothing exchanges" and parent support groups. These types of programs reflect the fact that many of these districts are attempting to address the poverty issues that contribute to the at-risk status of their student populations.

Urban/suburban programs portray yet another picture. Staff consistently express more positive attitudes about their efforts and accomplishments than do their colleagues in rural and reservation areas. Students function higher than children in other regions, and show more academic progress--at least for those children who remain in the system long enough to track. Urban staff are more stable than staff in other regions, and it is easier to offer them training given the proximity to universities and community colleges.

Nevertheless, the urban portrait of at-risk children is disturbing for other reasons. Although the reported incidence of at-risk factors is not as high for urban children, a profile of poverty and neglect still emerges. The effects of parental substance abuse and abusive home environments are particularly pronounced for urban children, and this finding suggests that many urban children are most at-risk when their home environments are "dysfunctional." And, more than in other areas, these children are less likely to remain in the same school.

Many urban programs are tackling these problems head-on. One district offers classroom settings specifically geared to "welcome" transient students and ease their transition to permanent status; other districts are actively reaching out to parents through parent liaisons and social workers. Staff are confident that full-day kindergartens, reduced student-adult ratios, summer schools, and curriculum modifications *are* making a difference in the lives of these children.

Overall, these findings strongly suggest the need for local autonomy in program planning, implementation, and evaluation so that the unique aspects of at-risk student populations may be appropriately addressed.

• Program implementation issues are key factors affecting the likelihood of program success.

Much research has shown a relation between "effective schools" and implementation patterns. One example is a 1988 evaluation of a California school reform initiative wherein "high gain" schools were noted to have "implementation patterns" associated with eight factors: "(1) clear and consistent district reform visions...; (2) more active use of cross-role teams and implementation plans; (3) stronger implementation coordination between the school and the district...; (4) greater use of initial training; (5)

active administrator pressure and monitoring; (6) substantially more on-going assistance, both from district and school leaders; (7) stronger on-going administrative commitment and leadership; and (8) tight coupling between schools and their districts" (Odden and Marsh in Hannaway and Crowson, p. 55). Preliminary comparisons[28] of site evaluations, staff perceptions, and outcome data corroborate this research. It appears that successful sites do, in fact, have a clearer vision of their at-risk programs, better communication and involvement at all levels, high expectations, teacher commitment, and strong and stable program leadership.

Specifically, *effective communication* at every level of the organization is essential for successful program implementation: when communication is lacking or inadequate, programs suffer. Communication, including the active participation of everyone who will be affected by an organizational change, needs to be initiated early in the change process so that changes are not initiated in a top-down fashion. Teachers want to be involved in program planning and decision-making activities, not just in implementing programs, and they want time to participate in these activities. New programs must be aligned with a well-articulated and shared district mission that has been locally defined through a participatory process.

In addition, schools and social service agencies must *collaborate* if programs are to effectively serve at-risk students. Because of the extreme nature of the social and emotional needs of at-risk students, providing social services has become a *de facto* function of the schools. Because urban, rural, and reservation programs exist in such different contexts and environments, local collaboration is believed to be the most effective means of planning how to deliver services. Social services are most desirable when they are based at the school site and provided by qualified social service staff; however, teachers need training on how to work with social service providers. By moving services closer to the students, social services will also be more readily accessible to their families.

Strong and stable leadership and administrative support are necessary for programs to succeed: lack of this support has been an impediment for many programs. One problem with school leadership has been extremely high administrative turnover. When new administrators are placed in programs every year, they bring their own personal goals, beliefs, and directions. Often they have not been provided with historical knowledge of the programs for which they are responsible, and usually they had no involvement in program planning. In some instances, the only program continuity has been provided by a stable teaching staff, who tend to become cynical watching administrators come and go. Turnover of program leaders has been a concern for nearly all programs, but has been especially severe in reservation programs. An incentive structure to create stability at the administrative level should be thoroughly explored.

Several districts that are "ahead of the game" began to address at-risk issues prior to H.B. 2217 (1988). When these districts received additional funding, they had a clear idea of what kinds of programs and activities were needed to supplement their district efforts. At-risk programs were designed to meet specific needs for particular children, and greater efforts were made to integrate these services within a "total delivery system." In contrast, Morrison Institute evaluators reported some districts' struggles to implement "top-down" programs with ill-conceived objectives, lacking any integration with overall district or school initiatives. As a case in point, one district showing the least gains in ITBS scores is one that

[28]Individual district data *have* been examined to determine patterns of "what works;" however, a more definitive analysis of individual districts' successful programs will be highlighted in an additional report: *Promising Practices for At-Risk Youth* (forthcoming in June 1992).

has experienced considerable political conflict between the school board, district/school administration, program administration, and teaching and support staff.

These findings suggest the need to create a "school climate" conducive to program success. An argument can be made in support of preliminary program planning, with technical assistance if needed, to involve staff and administrators in developing a comprehensive plan incorporating appropriate training, school-community partnerships, and on-going monitoring and evaluation.

• Evidence suggests that the length of time programs have had to implement services makes a difference in the evaluation results obtained--the longer the program's chance to evolve, the more satisfactory the program implementation.

This finding refers to observed differences between phase I programs (initiated in FY 1988-89) and phase II programs (initiated in FY 1989-90). In virtually all instances, evaluation results were more highly positive for phase I than phase II programs. The only significant variable that distinguishes between these programs is the length of time they have operated under the auspices of H.B. 2217 (1988).

It appears that programs need time to evolve.

• Key early childhood student service strategies identified as "promising" include: reducing staff-student ratios, implementing full-day kindergartens, and supplementing individualized instruction.

Reduced staff-student ratios, full-day kindergartens, and tutorial programs (particularly those delivered during the school day) consistently appear as "effective" strategies holding promise for at-risk youth. National research also supports this finding. These strategies share one critical feature: children receive more, and more individualized, time and attention.

Although the interpretation of class size research has been highly controversial, a recent meta-analysis of class size research reveals that smaller classes result in higher student achievement, and these effects are cumulative (Mitchell & Beach, 1990). Further, large scale experimental studies in Tennessee show that the positive effect of small class size for minority students in primary grades is twice that for whites (Finn & Achilles, 1990). The minority factor is particularly germane to the at-risk study because over 80 percent of the students served through Arizona's at-risk programs are ethnic minorities. Because reducing class size on a large scale has a significant price tag, educators are now searching for ways to reduce class size using available resources. Mitchell and Beach describe strategies such as "redeploying staff" for designated parts of the school day or "redistributing students" through creative grouping for some instruction. The use of classroom aides can also impact class size ratios.

Extending the traditional half-day kindergarten schedule to a full day appears to be another promising practice for serving at-risk students. A recent review of the research on full-day kindergarten (Puleo, 1988) revealed that, although many research questions remain to be investigated on this practice, the available evidence largely favors full-day programs over half-day, particularly for lower ability and low socio-economic status (SES) students. Additionally, achievement effects are shown to be long-term, with favorable findings continuing when students are followed into the upper grades, even as high as eighth grade.

Teachers also believe that tutorial programs are effective, but only if implemented under the appropriate conditions. For example, before- and after-school tutorials have not been as well received as

during-school programs. If they are conducted during-school, teachers prefer that tutoring take place within the classroom setting rather than on a pull-out basis. Several other aspects of delivering tutorials must be considered if an effective program is to be implemented: the frequency and intensity of the tutoring, the process by which students are identified, and the skills identified for tutoring.

In general, "promising practices" for at-risk children appear to be those that increase both individual attention and instructional time for students. Notably, these are also costly reforms.

- **Developmentally appropriate practices (DAP) appear promising, but evidence is inconclusive as yet.**

The use of DAP is desirable and well supported in the early childhood literature and research (National Association for the Education of Young Children, 1985; Bredekamp, 1987). As defined by the NAEYC, these types of practices address the total educational environment of children including curriculum, teaching strategies, social-emotional development, motivation, parent-teacher relations, the physical environment of classrooms, evaluation techniques, and class size, among other factors.

Within Arizona, virtually all K-3 at-risk pilot programs focused on the increased use of DAP through implementing curriculum modifications incorporating "whole language" and experiential math programs. Many programs used at-risk funds to purchase the instructional resources needed to implement DAP, such as classroom libraries, books with audiotapes, and math manipulative materials. Teachers are extremely positive about the benefits of these types of enriching materials for the students.

However, the actual effectiveness of DAP in Arizona's at-risk pilot programs was difficult to assess because of wide variations in the extent to which they were understood, employed, and implemented. In addition, DAP tended to be incorporated into other intervention strategies making it difficult to separate them for analysis. As a result, Morrison evaluators, ADE personnel, *and* some district personnel have expressed concerns regarding apparent inconsistencies in the understanding and implementation of DAPs. Further district efforts are required to enhance uniformity of practice so there can be meaningful analysis of whether or not these practices "work" with Arizona's at-risk pilot students.

The implementation of developmentally appropriate practices needs to be assessed further.

- **Research findings suggest two distinctly different aspects of "effective" parent involvement: 1) parent support, and 2) parent training.**

Efforts to involve parents were required as part of the K-3 at-risk legislation, and all programs did indeed offer parent involvement components. Overall, parental involvement is believed to have improved since the initiation of the at-risk programs, but much more progress is needed and desired.

From the at-risk evaluation, much was learned about the lives of at-risk children and their parents. For example, many parents exist in a cycle of poverty and lack the most basic necessities. By and large, they are not educated, and speak English poorly if at all. Most care about their children, but do not feel comfortable in the school environment because they themselves met with failure there.

One key finding centers on teachers' perceptions of parental *support*. Although lack of *parent participation* is considered pervasive, it does not have as negative an impact on a child's achievement as lack of support. Therefore, garnering parental support becomes a *de facto* role of schools attempting to improve the educational outlook for their at-risk students. Evaluation results indicate that the most

effective means of getting parent participation is through social events where food is served. But, to build parent support, verbal, one-on-one communication from the classroom teacher or another staff member is the best strategy.

Parent workshops, particularly of the "hands-on" variety (e.g., make-and-take), have been shown to be somewhat effective. These workshops, however, tend to reach a relatively small number of parents--often *not* the ones who need the contact most. In rural areas, classes that upgrade parents' own skills (e.g., ESL and G.E.D.) have met with some success.

In sum: 1) Parent involvement initiatives, targeted specifically toward parents of at-risk youth, should first consider the existing level of parent support. Garnering support seems a necessary prerequisite for parent involvement. Activities that promote school-parent rapport and establish schools as comfortable, non-threatening environments may initially hold more promise than parent workshops or other parent training activities.

2) Workshops that require the active participation of parents are more successful than those that merely present information; adult education classes also hold promise for eliciting parent support and participation.

- **At-risk pilot sites must have the "right" people for programs to succeed--those with appropriate training and commitment to work with at-risk youth.**

Survey data, open-ended responses, and interview data on staff services make a strong case for the conclusion that quality and commitment of staff are key aspects of program success. Yet data also suggest that staff pre-service and in-service training often fail to prepare staff for the challenge of working with at-risk populations. Program personnel recommend that pre-service training include more and earlier practical teaching experiences in diverse settings, including those with at-risk populations, and that students be encouraged to exit undergraduate programs with ESL certification. Internships, mentoring programs with master teachers, and five-year undergraduate programs are additional options for improving pre-service programs. Other district recommendations include more collaboration and closer linkages between schools and universities, and greater input establishing teacher training requirements.

Quality on-site in-service training is often difficult and costly to provide. Making better use of available communication technologies could alleviate some of these problems especially in rural and reservation area. Suggested incentives for promoting professional development include: giving teachers control of resources at the building level, paying for college courses with the stipulation that teachers stay with the district for a designated number of years, providing stipends for teachers who fulfill a staff development function in the school, and paying teachers to attend training offered during the summer.

Staff training--both pre-service and in-service--is an area in need of state and local attention. In particular, strategies for providing training in more isolated districts need to be explored further. Additionally, strategies to reduce turnover should be developed in all programs.

7-12 PROGRAMS

Given the characteristics of 7-12 at-risk pupils, descriptions of program strategies designed to meet their needs, and a summary of evaluation activities and results, a portrait of at-risk youth, staff, and programs has unfolded. The major findings of our analysis of 7-12 at-risk pilot programs are:

• The 7-12 at-risk pilot programs, as a whole, have had a positive impact on the lives of dropouts and potential dropouts.

Arizona's 7-12 at-risk pilot programs have implemented a number of educational alternatives to help dropouts and potential dropouts. During FY 1990-91 alone, nine out of every ten program participants reportedly remained in school or had graduated. Attendance rose for the first time since the inception of the programs. ITBS gains have been made in language and math--with twelfth grade students exiting at higher skill levels than their predecessors in these areas. Students and parents alike have attributed a number of attitudinal and behavioral changes to program participation, often crediting helpful and caring staff with providing more individual attention. Staff and students, particularly at the junior high school grades, note increased parent involvement and participation in the programs. Much-needed funding has allowed alternative programs and activities to develop and expand, and there has been an unprecedented level of accountability associated with this funding.

The 7-12 at-risk programs have continued to meet the challenge of working with teens who are well acquainted with school failure. Many of these students have entered these programs lacking even the most basic skills--therefore, progress reflected in this evaluation must be looked at relative to where these students began. For many district staff, however, this progress is simply not good enough, resulting in mixed reviews of program effectiveness. Unlike K-3 programs in which there is a prevalent compassion for the plight of at-risk children, 7-12 programs frequently are embroiled in controversy--caught between the extremes of staff opinions regarding appropriate educational and support services for at-risk youth.

There is no doubt that at-risk teens need to exhibit greater skills in all areas, and reading in particular. But more important perhaps, schools need to address philosophical issues as: the comparability of curriculum between "traditional" and "alternative" courses of study, desirable types of delivery systems for at-risk youth, and whether or not to actively solicit parent involvement. As do their K-3 counterparts, 7-12 schools need to establish more collaborative partnerships with social service agencies, and make greater efforts to reach out to the business community. Staff training needs to target non-program staff as well program staff. Also, more staff are needed--not only instructors, but counselors and social workers as well.

At-risk youth have shown progress within the context of the Arizona At-Risk Pilot Project. However, there are a variety of program improvements which must be made to further enhance the effectiveness of these programs.

• Consistent descriptive and statistical differences suggest that 7-12 at-risk youth, programs, and staff vary regionally--and in patterns somewhat different from their K-3 counterparts.

In the K-3 at-risk pilot programs, reservation children were found to be "most" at-risk based on the prevalence of at-risk indicators. In contrast, for the 7-12 at-risk pilot project, urban program youth are characterized by *the most* indicators. Urban 7-12 at-risk youth represent a broader spectrum of ethnic representation than youth in other regions and tend to be from the least "nuclear family-oriented" households. More urban youth have children, have a sibling who has dropped out of school, have dropped out themselves, indicate poor health, have seriously considered or attempted suicide, skip school, been suspended or expelled, been convicted of a crime, and have parents who are neither supportive of nor involved in their education.

Key personnel among urban programs are more stable than in rural or reservation areas. Urban staff, however, are more negative regarding program implementation and more reserved in their assessment of program outcomes. While 80 percent believe they are contributing to at-risk teens' progress toward completing high school, 60 percent feel they are watering down the curricula in order to do so. Nevertheless, although urban teachers appear somewhat pessimistic about their accomplishments, urban students do not appear to share this perception. These students, more than their rural and reservation peers, view program staff as helpful and caring, and credit their programs with involving their parents more with their education, improving their grades, helping them stay in school, helping them set future goals, and increasing their self-esteem. With respect to the latter, it is noteworthy that more urban programs have incorporated specifically-designated social/support activities as part of their at-risk programs than have other regions.

External evaluators, in consulting with program personnel, hypothesize that one reason for negative urban staff perceptions of their programs may be that these programs have tended to implement discrete activities that are more difficult to coordinate and integrate within a total delivery system. In addition, because pupils are "mainstreamed" for most of their schooling, they are subject to other non-program staff members who may not have the training and/or compassion to "deal" appropriately with this population. Although a majority of the discrete components are fulfilling their specific purpose (e.g., vocational components result in positive vocational outcomes), it may be difficult to produce wide-ranging outcomes from "one-shot" intervention strategies.

Rural at-risk youth in Arizona's pilot programs represent a more mobile population and a greater percentage of recent immigrants to the United States. It is not surprising, given this, that more at-risk rural youth speak a language other than English at home and have language difficulties in school. They tend *not* to be involved in any school/community activities, and have a history of academic failure (with one or more grade retentions in their elementary years). Relatively more rural youth use drugs and/or alcohol on a weekly basis.

Conspicuously, rural staff and students are the most positive of all regions regarding virtually every aspect examined at the 7-12 level. Staff are positive regarding program implementation, delivery systems, all student services, and program outcomes. And, students in these programs which are largely "holistic" in their approach to at-risk pupils, are more likely to attribute changes in behaviors and attitudes to their participation in them. Moreover, rural program students are out-performing their peers academically.

Finally, **reservation youth** appear to reflect "at-riskness" more on the basis of life circumstances over which they have little control than because of behavioral problems. As profiled, more reservation students indicate that they have responsibilities that interfere with school work and live in homes that do not have year-round electricity, plumbing, and/or telephones. Most disturbing, more reservation pupils do not feel safe and/or protected at home. In fact, a majority of program directors have estimated that three out of every four reservation pupils is from an abusive home environment.

As previously mentioned for their K-3 counterparts, the isolation of reservation districts compounds their problems. Parent involvement is difficult, given that many parents do not have telephones or access to transportation. Staff qualifications pose particular problems--both in recruiting qualified staff and keeping them once trained. Providing appropriate training is also problematic--it is difficult to recruit qualified trainers to provide on-site in-service; it is equally demanding and costly to send staff to other locations for training. Social service linkages are hard to establish because of the tremendous demands that currently exist on the services and because of the tribal infrastructure governing

most of these services. It is perhaps not surprising, then, that reservation staff are least positive regarding many aspects of their programs.

Regional differences, although distinct from those found among K-3 programs, suggest a similar conclusion--that there is a need for local autonomy in program planning, implementation, and evaluation so that the unique aspects of at-risk student populations may be appropriately addressed.

• Consistent descriptive and statistical differences suggest that at-risk youth in grades 7-8 differ from their 9-12 peers.

A majority of the seventh and eighth grade students examined within this evaluation study are in rural and reservation areas, and for this reason, the demographic profile obtained may be more suggestive of regional differences than age/grade differences. Nonetheless, students in grades 7-8 are almost exclusively minority (93 percent) in contrast with their high school counterparts (75 percent). A greater percentage indicate that they live with both natural parents and speak a language other than English at home (60 percent *versus* 40 percent at the high school level). There are proportionately more females included in this population, and more students whose mothers are unemployed outside the home. A slightly greater percentage of junior high than high school students indicate that they do *not* feel safe and/or protected at home. Overall, however, students in the earlier grades exhibit fewer indicators of "at-riskness" than their 9-12 peers.

The image that emerges from a collation of all data is that these students are truly at a stage in their development where they could "go either way." It may be of practical significance that there are more indicators potentially predictive of academic success among these students than for high school students--notably, a majority of these indicators suggest emotional-behavioral problems (not involved, drug/alcohol use, suspension, juvenile delinquency). This implies that interventions have a better chance of "preventing" school failure.

The interventions that have been studied primarily involve supplemental services, although there are several school-within-school models. Notably, junior high students responded most positively to social support: *these kids need people to care about them.* Moreover, junior high survey respondents are in greater agreement that program participation has prompted their parents to help them more with schoolwork, and that programs have provided more opportunities for parents to become involved. Staff for grades 7-8 reflect this same attitude, expressing greater satisfaction with parent involvement than their 9-12 colleagues. In fact, junior high staff are more positive than their colleagues regarding program implementation, outcomes, and staff training.

On the other hand, junior high students are more likely to indicate that staff do not care and/or are not helpful. Interview and anecdotal data suggest that some 7-8 staff are more likely to adopt a "tough" disciplinary stance with these students. At the same time, these students are at a stage where they are--perhaps more than ever--questioning authority and responding to peer pressure while at the same time trying to maintain strong ties with adult role models (Task Force on Education of You Adolescents, 1989). *Some* reconciliation between positive staff views on their involvement and negati student views seems desirable.

Evaluation findings have not provided definitive answers regarding successful interventions for junior high students; however, there are some components perceived as "making a difference" in the eyes of students. Urban students respond to support groups and a self-contained class that provides academic and social support as well as opportunities for work experience. Rural pupils respond to school-within-

school settings, which allow for more individualized attention and self-paced curriculum. And, reservation youth respond to vocational activities that incorporate applied academics and social support.

More intervention programs are desirable at grades 7-8 because at-risk behaviors are not well-defined as yet. Programs may, therefore, have more impact in "curbing" the further development of at-risk behaviors among early adolescents. However, such programs should be implemented by qualified staff who are committed to working with this challenging population.

• Program implementation issues, similar to those identified for K-3 programs, are key factors affecting the likelihood of program success. One issue in particular is more pronounced at the 7-12 level, however, and needs to be more systematically addressed: philosophical differences among 7-12 staff regarding at-risk students and programs.

All program implementation issues discussed earlier in this chapter with respect to K-3 programs hold true at the 7-12 level as well. However, philosophical differences among staff in their attitudes toward at-risk teens and programs are much more pronounced at the 7-12 level. These differences are evidenced by numerous descriptive and statistical differences among 7-12 staff in all data sets, and in staff survey responses in particular.

Differences between administrators and staff were quite apparent. Administrators consistently gave more *strongly* positive responses than did their teaching/specialist staff. This may reflect the optimism and support of administrators and, in fact, select data suggest that such support and program leadership *are* considered major contributors to program success. Nonetheless, not all administrators have been perceived as being "in touch" with the grass roots. Given the nature of administrative turnover, this appears to be a valid perception in some cases. The disparity between administrative and staff viewpoints is of some concern.

Differences between program and non-program staff were also significant and are more troubling. It was anticipated that program staff would be more positive than non-program staff regarding program efforts; however, it was not anticipated that *one of every ten staff members surveyed had no knowledge of their district's programs for at-risk youth.* In addition, many non-program staff expressed opinions that were unsympathetic regarding at-risk youth and *against* at-risk programs (e.g., "At-risk kids are simply trouble-makers looking for easy ways out;" "Our [programs] and policies are a joke;" "It should be called: How to earn a credit in 3 easy minutes!").

Data show more consensus among staff at sites which implemented self-contained programs (e.g., off-site alternative schools). In addition, a greater percentage of students in these programs say they feel "respected" as human beings, despite their reputations. Notably, more "holistic" changes in attitudes and behaviors have been observed among students in these delivery systems. Many at-risk teens say they feel more comfortable in these settings because they are not as "different."

In contrast, more staff discrepancies are documented in districts implementing more discrete interventions (e.g., one class a day). *Program staff* may feel confident that they are making progress with their pupils; among *all* staff, however, there is more diversity in attitudes and little consensus regarding "what works" for at-risk teens. It is obvious that within such delivery systems, at-risk pupils interface with non-program staff members for a significant proportion of the day. Perhaps it is because some staff members have negative opinions of at-risk students that students in discrete interventions express fewer changes in attitudes and behaviors.

Research has suggested that successful dropout programs create a school climate that is secure, safe, and comfortable. As Hamby states: "The emotional atmosphere must be positive so that students will not fear a loss of self-esteem by being there" (1989, p. 83). To the extent that philosophical differences among 7-12 staff reflect theirs behavior toward at-risk students and programs, students undoubtedly receive "mixed messages." Evaluation of Arizona's at-risk sites demonstrates that a cohesive philosophy among staff in the more holistic programs is associated with more positive attitudes toward program outcomes among students. Programs in which staff have notable philosophical differences associated with more negative student perceptions.

Findings parallel K-3 evaluation results in many respects, and suggest the need to create a "school climate" conducive to program success. At the 7-12 level in particular, greater efforts should be implemented to achieve consensus regarding at-risk youth and appropriate interventions.

- **In the context of this evaluation, alternative programs appear most "promising" for at-risk 7-12 students; however, each type of student service strategy may be described as "promising" in relation to its specific intent (e.g., to provide vocational services).**

This report has repeatedly noted the diversity of programs implemented at the 7-12 level. This diversity has added to the complexity of the evaluation efforts undertaken and has produced findings that suggest that each type of program has some specific merits. For example, alternative and school-within-school students have rated behavioral and attitudinal outcomes positively "across the board;" academic components produce positice academic outcomes; vocational components produce positive vocational outcomes; and support service components produce positive outcomes related to self-esteem and coping skills. Which practices are most promising? It depends.

The Holistic Models

1) Alternative Schools: Evaluation results consistently point to the alternative school model as the most effective and positively perceived delivery system for at-risk students at the secondary school level. By incorporating a variety of instructional, vocational, and support strategies into a comprehensive system, customized to the unique and diverse characteristics of older at-risk students, alternative schools seem to be providing a viable option for students who have been disenfranchised from the "regular" educational system. While mainstreaming and heterogenous grouping are important goals for serving at-risk students at the primary level, this approach may not be as desirable for older students who appear to function well when grouped with students similar to themselves.

The "credibility" issue is important in looking at the alternative school, since there is a perception among non-alternative school staff that they offer an "easy out" for students who have not succeeded in the mainstream. High academic standards and quality curriculum must be in place if alternative schools are to be viewed as a positive intervention for at-risk students. Regional differences are also significant, since seven of the nine alternative schools in the pilot programs are in rural areas. However, alternative schools have been quite well established in urban areas for many years, and it may be happenstance that only one urban pilot site employs the alternative school model. Further, alternative schools may not be the best delivery system for reservation districts where the majority of the population is considered to be at risk. But the concept of an integrated, versus a fragmented, delivery system such as that provided through alternative schools deserves consideration.

2) Schools-within-schools (SWS): The SWS model provides educational programming that is a compromise between alternative schools and mainstreaming programs, and their effectiveness is also shown to be somewhere in the middle in terms of student and teacher perceptions as well as student achievement. Students, however, rate behavioral and attitudinal outcomes consistently positive, and are the only group of students to do so other than alternative school students.

3) School-wide reform: Another holistic approach being implemented in two at-risk programs is school-wide reform. Only one of these efforts was formally assessed as part of this evaluation, a reservation program that instituted the four-period day during year three of the project. This school reform model has affected every student in the high school, all of whom are considered to be at risk, as well as every staff member. After the first year of implementation, responses to the change have been positive overall, with students somewhat more positive than staff. This totally integrated approach to serving at-risk students warrants close examination and may be particularly applicable for reservation sites with large at-risk populations.

The "Discrete Intervention" Models

1) Academic and Instructional Strategies: Academically-focused activities do produce feelings of academic success among students. However, there was no consensus between students and teachers about what constitutes effective instructional strategies. Students prefer self-paced instruction, while teachers believe that this method does not provide adequate direct instruction. Computer-assisted instruction appears to be effective when used as one aspect of a comprehensive program, but not as a stand-alone strategy. Tutorials are well-received, but again must be planned as a part of an integrated system. In sum, each separate instructional strategy appears to be effective only in terms of how well it is incorporated into a total synergistic system.

2) Vocational Services: The wide range of vocational-oriented services that have been implemented has resulted in improved attitudes and abilities in work-related areas. Students enrolled in vocational programs report increased awareness of career opportunities and feel better prepared to enter the workplace than students not enrolled in these programs. Although staff believe they are somewhat effective, they also feel that the opportunities are limited and sometimes difficult to access.

3) Support Services: *More* is the word. Support services are viewed relatively positively and are resulting in more positive attitudes among the students receiving them, particularly among students in grades seven and eight. More qualified social service staff are needed to serve more students in a timely manner. Because seventh and eighth grade at-risk students do not show as severe a level of at-riskness, and respond positively to support services, support services efforts should be concentrated at the middle school level. Perhaps more severe at-risk behaviors could be averted by intervening earlier with more support.

Since clear conclusions regarding the most effective strategies for secondary level at-risk students were difficult to establish, Morrison Institute staff revisited national at-risk literature, specifically to review studies pertaining to interventions similar to those evaluated in the *Arizona At-Risk Pilot Project* (e.g., alternative schools, tutorial programs, and vocational and social services). Throughout the national literature, similar research problems were documented (e.g., limited access to longitudinal quantitative data on student outcomes) and inconclusive results were reported regarding "what works" (Catterall & Stern, 1986; Gold & Mann, 1984; Reilly, 1986). Much of the research validated such notions as: 1) implementation *processes* need to be assessed, and 2) attitudinal changes are important student outcomes. The conclusion of the Gold and Mann study is particularly relevant to the present at-risk evaluation:

"Whether programs are successful will vary from student to student, teacher to teacher, program to program... But exploration of the underlying processes has shown that those programs did indeed produce marked change in particular attitudes and perceptions of certain identifiable students in a way conducive to better behavior and greater scholastic achievement."

Evaluation findings strongly suggest the need for more "holistic" approaches to working with at-risk teens. While such self-contained programs hold promise, however, they may not be realistic options in some areas. Discrete services can be effective, if "impact" is sought in a discrete skill. Nonetheless, a better solution for implementing discrete services is greater systemic integration of services for meeting the needs of the "whole" student. Again, local autonomy in planning and implementation appears to be critical.

• Parent participation is problematic at the higher grade levels.

The older the student, the less parent involvement, and the lower the expectations that schools should expend resources to garner parent support and involvement. Some staff firmly believe that schools should be reaching out to more parents; others are adamantly opposed to spending their time and energy on what they perceive as "not my job." Still, the same strategies that work in the primary grades work at the secondary level; namely, holding school events and making personal verbal contacts. Parents of middle school students are more likely to respond to these strategies than are parents of high school students, and the middle school students are more likely to realize the benefits of increased parental support.

It should be pointed out that in some respects, efforts--or increased efforts--to involve parents of 7-12 students resulted from the at-risk program evaluation. Many districts did *not* emphasize this aspect of program development, but this was not a concern because they were not required to do so by law. However, to accommodate those districts that *did* include some parent outreach, uniform reporting measures were developed and distributed by Morrison Institute to all sites. Several sites expressed the notion that if they had known that they were to be evaluated on parent involvement, they would have done something more--and, in fact, they did.

Parent involvement is weak among 7-12 programs. Given that parent participation is socially perceived as desirable (but that there is often faculty opposition to investing energy in such activities at the upper grade levels), it may be worth developing initiatives specifically targeted for secondary level parent activities. Based on K-3 program evaluation findings, it seems prudent to point out that any initiatives should first take into consideration the level of parental support for public instruction since garnering support appears to be a necessary prerequisite for parent involvement.

• As with K-3 programs, 7-12 at-risk pilot sites must have the "right" people--those with appropriate training and commitment.

Results regarding staff training parallel those found at the K-3 program level (see earlier discussion) and as such, our conclusion is the same:

Staff training--both pre-service and in-service--is an area in need of state and local attention. In particular, strategies for providing training in more isolated districts need to be explored further. Additionally, developing strategies to reduce turnover should be explored among all programs.

PILOT PROJECT AND EVALUATION PROCESSES

The demand for greater accountability coupled with limited resources has resulted in a recent trend to create "pilot" projects by Arizona policy makers. The idea is sound: distribute funds based upon competitive responses to a request for proposal (RFP), require an external evaluation, and ultimately make decisions regarding permanent funding based upon project outcomes. Indeed, this is the process adopted for the *Arizona At-Risk Pilot Project.*

The scope of this project was extensive since it included the monitoring and evaluation of programs within over one-quarter of Arizona's most "at-risk" districts. Much has been learned by the evaluators, by the pilot sites, and by the Arizona Department of Education, regarding the arduous task of monitoring and evaluating long-term, large-scale programs. In retrospect, many "systemic components" necessary to complete the project in the most efficient and effective manner did *not* exist at the time the pilot was initiated–streamlined state RFP procedures, a Department of Education infrastructure for program monitoring, valid performance-based student outcomes measures, and a funding cycle that encouraged and allowed long-term planning.

This section reflects upon insights resulting from an analysis of the overall pilot and evaluation process itself that have implications for future at-risk programming and funding.

- **Adequate program planning was not evident in a majority of district proposals; however, adequate time for planning was not available prior to receiving program funds.**

Initial H.B. 2217 (1988) funds were appropriated in June 1988 for use during the school year beginning August 1988. However, prior to the distribution of funds it was necessary for the Arizona Department of Education (ADE) to develop a RFP process and to determine the relative "at-riskness" of each district in the state. Once these procedures were completed, districts had about six weeks to develop their proposals. Although some technical assistance was provided by ADE, a lack of program planning/grant writing expertise coupled with the short time frame resulted in very little "creative" planning. Further, while the RFP required the development of specific program objectives, most proposals included objectives that were nebulous, unrealistic, and unmeasurable. Primarily because of time constraints, proposals were accepted despite their poor quality, and funding was distributed.

Generally, timing and planning concerns continued throughout the project. Program reapprovals could not occur until annual legislative appropriations were secured (usually late June). The reapprovals then needed to be reviewed by ADE personnel and placed on the State Board agenda for final approval. Short turnaround times resulted in many districts simply resubmitting their original proposals with only date changes, thus perpetuating a lack of long-range planning and program refinements.

A lack of adequate long-term planning has had several consequences. Some programs have developed in a "piecemeal" fashion, lacking integration within the district/school. Other programs have failed to involve in planning the personnel who are charged with implementing the programs. Such "top-down" initiatives have often been difficult to implement effectively because they lack the support of the entire faculty. Initial limitations in the proposals (e.g., regarding objectives) were never adequately addressed in some cases, resulting in a lack of local program focus and systematic evaluation.

Why is planning important? Evaluation data reveal that sites that had developed more comprehensive plans based upon extensive input from staff *did* demonstrate greater outcomes. District

and school personnel have acknowledged repeatedly the importance of initial planning and on-going review and adjustments. Those who conducted self-evaluations were better aware of program adjustments that needed to be made, and produced better results over time.

District and school personnel have also acknowledged that although planning is important, it frequently does not occur without some outside requirements or "pressure." Further, many personnel do not like to invest time in planning without some guarantee that their time will be worth the effort (i.e., the grant money will be available). Finally, many districts simply need technical assistance in long-term planning. Although the movement in Arizona and across the nation is away from state "requirements," even the Governor's Task Force for Educational Reform has recommended that schools develop plans *prior to the receipt of at-risk funds.*

Districts and/or schools should be required to develop comprehensive program plans. Based upon feedback from districts, this planning period should be from three to six months. Technical assistance from the state department and/or planning monies is/are essential.

- **The current funding cycle, dependent upon annual appropriations rather than formula funding, does not promote long-term planning and effective programming.**

As noted in the previous discussion, late adjournments of recent legislative sessions have resulted in the authorization of funds occurring only weeks prior to the beginning of the next school year. This time frame has effectively curbed district/school efforts to create long-range plans involving at-risk monies. Beyond influencing planning, however, the funding cycle has also affected program implementation.

Once funds were authorized, the flow of paperwork from the *district* to the *Department of Education* to the *County School Superintendent's Office* and then back to the *district* resulted in funding delays--up to six and seven months in some cases. Some smaller districts could not afford to count on the fact that the "check is in the mail;" funding delays sometimes prevented services from being offered and, ultimately, affected the quantity and quality of program outcomes available for study. Although greater efficiency in processing paperwork could alleviate some problems, a more fundamental issue centers on the annual funding cycle. Annual legislative appropriations, used as a funding mechanism, simply are not conducive to long-term planning and efficient implementation.

The alternative is to create permanent funding for at-risk programs through formula funding. However, unlike most existing formula funds that are "block grants" (i.e., unrestricted funds), interviews with program staff have repeatedly revealed that "targeted" funding for at-risk students is preferable. Unless funding is targeted, districts report, there are too many demands on their budgets and not enough advocates for at-risk students when it comes to budget decisions. Pilot districts want the accountability associated with targeted funding[29]; however, they do not want extensive restrictions on the use of these funds.

There is a need to establish permanent funding for at-risk programs, to ensure program continuity. Direct formula funding "targeted" toward at-risk programs is a preferred funding mechanism.

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[29]Unlike, for example, K-3 direct formula funds that provide direct funding without any state restrictions/requirements. A wealth of anecdotal evidence is available to show that the $100 plus dollars currently being provided for each K-3 student would have resulted in greater outcomes if targeted toward those students.

• The identification of district/schools as "at-risk" and the determination of grant amounts were appropriate for a competitive grant process; however, new mechanisms need to be created if permanent formula funding is utilized.

Consideration needs to be given to the criteria used as part of an "at-risk weight." Several weights currently provide additional funds for students who are identified as having certain characteristics (e.g., handicapping condition, LEP). The definitional characteristics for these weights are *very specific* in order to avoid labeling students for funding purposes. "At-risk," however, is a term not easily defined since there are a variety of reasons a student may be at-risk (e.g., poverty, teenage pregnancy, drug abuse, broken homes, drug abuse, limited parental support). Unfortunately, reliable and comparable data on most of these indicators are currently *not* available. In addition, it is important not to base funding on indicators over which districts/schools have some control (e.g., low test scores, absenteeism). If these factors are utilized, then improvements may result in a funding loss.

As a solution, indicators which cannot be manipulated and which serve as a "proxy" for at-riskness are being used in several states. New Jersey and Kentucky are using *poverty*, as measured by eligibility for federal free lunch programs, as their at-risk weight proxy. Poverty is frequently chosen because of its underlying linkages to at-riskness[30]. This does not mean that only poor students can be served with the at-risk weight funds, but instead it provides a mechanism for providing additional funding to the schools. Once the funding is received by the district/school, they are allowed to serve those students they believe to be at-risk.

Within Arizona, preliminary discussion among several state school finance experts has resulted in the identification of three indicators that have established databases and represent indicators over which districts have little control: poverty, mobility, and LEP. Since the state already partially funds a LEP weight, the current thinking is that only two factors would be used to establish an at-risk weight--*poverty and mobility*.

Two options for the measurement of poverty appear to be available and are being analyzed. One option is using census data (similar to federal Chapter 1 funding). However, using census data poses several problems and/or concerns: 1) necessary data will not be available until at least 1993, 2) data will not be available at the school-level, and 3) the database is updated only once every decade. The second option is to use the number of eligible students for the federal free lunch program. This too has problems since many high schools and some elementary schools do not offer such a program. In addition, the percentage of families that actually apply are fewer than those who are eligible. However, the advantage is that these data are available at the school-level and are updated annually. Continued work on the mechanics of funding is underway.

Finally, consideration must be given to an "adequate" level of funding. For the pilot grant project, districts/schools were allowed to request any amount within a certain range. If an at-risk weight is utilized, however, a specific amount needs to be placed in the formula. This amount should be no less than the average expended per student by these pilot programs (e.g., $227 for K-3 and $251 for 7-12). In addition, dependent upon the expectations for training, parental involvement and social service

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[30] The use of at-risk indicators as part of formula weighting is currently being analyzed by Dr. T.S. Lyons from the University of Nevada at Las Vegas and Dr. K.F. Jordan from Arizona State University. Their findings from regression analyses show that of eleven at-risk indicators currently used in Texas, one indicator--poverty--accounted for 90 percent of the variance, while mobility accounted for the next 1.5 percent of the variance, and LEP accounted for 0.4 percent (telephone interview with K.F. Jordan, October 1991).

coordination, the amount should be higher than the average. For example, Levin (1989), an economist from Stanford University, estimates at-risk funding should be about half again as much as is spent on nondisadvantaged students (e.g., approximately $2,000). In Kentucky, $528 per free lunch student was provided during FY 1990-91 for both general programming and for Family Resource Center support. Since nearly one-third of Arizona's students qualify for free lunch status, these amounts may not be realistic; however, they are offered as a starting point for discussion.

Lastly, additional funding (over the base weight amount) should be provided to small and rural schools, and for those programs that wish to develop more comprehensive services such as alternative schools. A minimum amount (e.g., $5,000-$10,000) should also be considered for all except the very smallest of schools.

An at-risk weight based upon poverty and mobility indicators would provide a mechanism for directing funds into a district/school; local decisions would then be made at that point as to which students are to be served. Additional funding should also be considered for small and rural schools and for more comprehensive services.

- **Arizona Department of Education technical assistance efforts contributed to project outcomes; however, the current state-level infrastructure for monitoring efforts needs continued refinements.**

The Arizona Department of Education contracted with Morrison Institute to conduct the evaluation study, but retained the functions of program monitoring and technical assistance. As a whole, the pilot programs responded very positively to the available technical assistance (especially at the K-3 level, although ratings for the 7-12 support improved over time). In fact, the greatest concern is that "more" was needed, particularly in reference to the initial grant writing process and on-going program refinements. Since many of the at-risk programs are located within reservation and rural districts, these sites do not have easy access to university training or staff support. The on-site visits and state-wide meetings/conferences were viewed as extremely helpful.

Program monitoring also proved to enhance program success; however, improvements to this process need to occur. There was initial uncertainty about the role of the external evaluator and the Department of Education in reference to annual reapprovals. Indeed, some of the information gathered by the external evaluators was also requested by the Department of Education and vice versa. Although individual evaluation reports prepared by Morrison Institute were available to ADE, this information was used inconsistently as part of the reapproval process.

Most important, however, was the overall perception by districts that there were no real "consequences" for not implementing activities outlined in their proposals. While districts complied with evaluation requirements, they often did so in an untimely manner resulting in overall delays of the broader external evaluation conducted by Morrison Institute. In the two and one half years of Morrison Institute's involvement with the project, only one deadline was met by all districts--when ADE "threatened" to withhold annual reapprovals. Although several programs were placed on probation, most districts have been conditioned to believe that negative sanctions will not be enforced even if they are not in compliance.

Historically, Department of Education efforts in reference to state-funded programs have focused primarily on monitoring budgets, not programs. As a result, the necessary program monitoring infrastructure is still being developed. Further, it is difficult to provide both technical assistance (e.g.,

help a district in trouble) and enforce sanctions (e.g., withhold funding if improvement efforts are not being made). Perhaps these two tasks cannot be performed by the same entity. In several states, a separate "accountability" office has been established to address this concern. Within Arizona, the Governor's Task Force has recommended that the Auditor General's Office take on the task of program monitoring. This separation of responsibilities should be given serious consideration.

Findings suggest that expanded technical assistance be made available and that state monitoring continue. However, monitoring may need to be moved to a separate agency or department for the explicit purpose of ensuring quality compliance with funding requirements by enforcing sanctions when necessary.

- **The external evaluation process had a positive effect on program implementation; there is, however, a need for greater emphasis on district self-evaluation/analysis.**

Overall, the majority of districts indicated that the evaluation process ultimately benefitted the programs, although complying with such requirements was an extra burden on their staffs. Having an external evaluation prompted greater attention to implementation processes, services provided, students served, and desired outcomes. District personnel, on the whole, felt the external evaluation provided greater accountability and found the information provided to them important--both as a means to validate their efforts and as input for program improvement and local decision-making. In addition, the external evaluation has resulted in a wealth of general information for state policy makers.

In efforts to determine the overall effectiveness of the total at-risk pilot project as well as of specific strategies, common data sets were collected to allow for individual program comparisons and aggregate analyses across all K-3 and all 7-12 programs. While this approach provided a wealth of data regarding the total project in a holistic sense, many of the unique characteristics and impacts of specific programs were "lost" in the aggregate. Although districts were encouraged to collect and report self-evaluation data, few districts did so. Instead, they relied solely on the external evaluation as their feedback loop. Many programs did not, therefore, have their own unique data upon which to base refinement decisions. The external evaluation should *not* serve as a replacement for a systematic internal evaluation. Many districts acknowledged that they would have liked to conduct their own internal evaluations, but do not have the staff, time, or the expertise to do so.

It appears that the external evaluation efforts have resulted in positive benefits at both the local and state level; such evaluation efforts should continue to be supported, but with additional emphasis on training district personnel to conduct quality studies of their own.

- **Valid measures of student outcomes and consistent recordkeeping and reporting mechanisms are lacking.**

The public is demanding the measurement and reporting of specific program outcomes. The development of appropriate assessment measures at the state level is highly desirable, particularly since many districts lack the expertise to define and measure program outcomes independently. Arizona has jumped ahead of most states through the development of its *Arizona Student Assessment Program* (ASAP). Unfortunately, this program was not available for use during this evaluation study. Indeed, on-going difficulties experienced in defining common outcome measures (in addition to standardized tests) lends support for the expeditious completion of the new assessment program.

Within this evaluation project, desired outcomes among programs were identified and categorized so that common data sets could be collected across districts. However, determining adequate measures

of these outcomes proved to be extremely difficult. Lack of standardization existed among districts on variables such as absenteeism, dropout rate, and grade retention. Most districts had never collected data on parent involvement and staff training activities. Extensive efforts were necessary just to determine *how many* students, staff, and parents were served, with even greater energy required to measure the *impact* of these services. Data reporting standards had to be designed and then "taught" to the districts. The results often included calculation errors, requiring a tedious and lengthy verification process. Great gains in the measurement of program outcomes were achieved; further efforts to create comparable assessment measures (such as ASAP) will serve to enhance future external evaluations in this state.

There is a need for continued/expanded support for the development of more standardized outcome measures. Districts and/or schools are ready to be held accountable, but most current assessment efforts and procedures are rudimentary at best and require continued state support and attention.

- **The label "at-risk" has, for many, negative connotations.**

Many pilot district personnel have expressed a dislike for the label "at-risk" because it is viewed as focusing on "the child as the problem." Educational leaders are increasingly advocating alternatives to the "at risk" label precisely because the label itself may connote underachievment and/or contribute to lowered expectations. For example, Levin (1990) has adopted the term "accelerated schools" to shift the emphasis away from the "child as the problem" to the "school as solution."

A dislike for the term goes beyond a semantic debate: it has had visible consequences in terms of program implementation. For example, the labeling of funds, programs, and students as at-risk has contributed to poor communication within districts and between districts and communities. In some cases, there has been a reluctance to publicize that a district is the recipient of "at risk funds" for fear that parents, community members, and staff may find the term offensive. Many districts created their own program acronyms and were successful in communicating the goals and objectives of their at-risk programs; yet many others did not.

The label has served a useful purpose in focusing attention on students at risk of academic failure because of poor environmental conditions, and in creating resources targeted toward these students. But the time is ripe for the state to provide leadership by adopting terminology that shifts the emphasis from "problem students" to school solutions.

There should be some consideration of creating an alternative label to "at risk" at the state and local levels.

RECOMMENDATIONS

Many suggestions are embedded in the previous sections of this chapter and this report contains many findings relevant to practice and policy at the local and state levels. This section synthesizes the findings in terms of key recommendations. It is by no means a comprehensive listing, but is intended to highlight state-level actions that could further the development of comprehensive programming for Arizona's students at risk. For the purpose of the recommendations, "state" is used when both legislative and Arizona Department of Education actions are encompassed within the recommendation.

1. **The Arizona Department of Education (ADE) should create a single, comprehensive unit which supports and assists local at-risk initiatives.**

   By streamlining state and federally-funded program at-risk related personnel (e.g., K-3 At-Risk, 7-12 At-Risk, LEP, Chapter 1, Migrant, substance abuse) into a single unit, the state can create the infrastructure and provide leadership to model and promote practices associated with successful program implementation at the local level. This is particularly needed in relation to "at-risk" districts and/or schools that do not have their own stable infrastructure.

   - **Develop a comprehensive plan for meeting the needs of at-risk populations.** Examine programs, funding goals and expectations, required paperwork, and existing accountability measures for the purpose of integrating these into a comprehensive plan.

   - **Define *general* standards for local district/school recipients of at-risk funds,** including expectations for local comprehensive plans to specify linkages among related programs (e.g., at-risk and LEP).

   - **Specify criteria and measures for program accountability** that meet federal and state requirements. Develop common criteria for non-test indicators (e.g., absenteeism, retention) since disparities currently exist in local definitions and reporting.

   - **Coordinate/consolidate program reporting functions** with the explicit goal of reducing paperwork.

   - **Design a computerized database and recordkeeping system for compiling and analyzing outcome data** (as determined by the comprehensive unit) and disseminate the technology state-wide.

   - **Define and implement consequences for programs that either do not complete requirements or provide unusable information in meeting requirements** to reinforce that the *quality* of programming, data collection, and reporting must be an integral part of compliance.

   - **Coordinate technical assistance to at-risk populations/programs.**

2. **The legislature should establish permanent funding mechanisms to support at-risk programs at *all* grade levels, provided that the Arizona Department of Education has created the infrastructure to handle funding requirements and ensure local accountability.**

At-risk youth have shown progress within the context of the *Arizona At-Risk Pilot Project.* Continued support is required to serve additional students (e.g., grades 4-6) and allow programs to evolve and improve. Pilot project personnel have repeatedly expressed that "targeted" formula funding is preferable to both block and competitive grant funding.

- **Create an at-risk weight to provide basic targeted funding.** Use factors such as poverty and mobility, as these indicators would provide a mechanism for directing funds into a district/school; local decisions would then be made as to which students are to be served.

- **Provide a small and rural school supplemental stipend, stipulating a base minimum.** These schools typically have smaller enrollments that would limit an at-risk allocation based on formula funding, and therefore need additional resources to provide services as costly to implement as in larger districts (e.g., paying an additional teacher).

- **Fund educational services within county detention centers,** using the Pima County Detention Center program as a model.

- **Institute an "education venture fund" with a separate request for proposal (RFP) process** to encourage and reward innovative and comprehensive programs such as Family Resource Centers or alternative schools that require greater resources than provided by formula funding. Require that proposals are submitted jointly by a local educational agency in collaboration with a local business partner such as a social service agency, association, or other organization.

3. **The state should adopt an alternative label to "at risk."**

The adoption of an alternative label associated with funding (e.g., Comprehensive At Risk Education, or CARE, funding) could get a lot of mileage in terms of creating a positive "state climate" for further program development. Although the at-risk" label has been useful, it is generally perceived as a negative term when applied to children, their parents, and districts.

4. **Local districts and/or schools should develop comprehensive plans, aligned with state standards, as a *condition* for initial at-risk funding and reapproval.**

Local autonomy is essential in creating appropriate programs to match the needs of the local population. Evidence from this evaluation has shown, however, that local programs based on district/school plans have been more effective than those without such plans.

- **Require that plans describe *how* services targeting at-risk children are coordinated with related educational and social services.**

- **Establish "planning grants" and/or allow adequate time to assist local districts develop their comprehensive plans.** Based on feedback from pilot districts, good

planning that involves staff, parents, and/or community members, takes time--at least three to six months.

• **Provide *individualized* technical assistance upon request to facilitate the *development* of quality plans.**

5. **The Arizona Department of Education's new "comprehensive at-risk education" unit should ensure that local plans are implemented.**

• **Provide *individualized* technical assistance upon request to facilitate the *implementation* of quality programs.**

• **Designate within ADE's comprehensive unit an "at-risk broker"** who would link local programs to an identified state-wide network of technical assistance, and disseminate information about at-risk intervention strategies that have proven to be successful in model sites.

• **Monitor/audit programs annually at first, then on a two-three year cycle,** to ensure progress toward locally-defined goals commensurate with state expectations. Consider separating this function from technical assistance.

• **Require districts to submit periodic self-evaluation reports (annually at first, then on a two-three year cycle).** Program evaluation is essential for accountability and as a tool for program improvement. The state should develop model evaluation designs aligned with specific intervention strategies and other resources for use by district personnel.

• **Develop the expertise at ADE and throughout a state-wide technical assistance network to review district/school self-evaluation documents and compile quality outcome reports to assist in future decision-making.**

6. **The Arizona Department of Education should use successful at-risk pilot sites to *demonstrate* "what works" for at-risk pupils.**

Pilot sites have invested four years in developing at-risk programs. Successful sites, and replicable programs (to be identified in Morrison Institute's forthcoming "what works" report), have staff who are valuable resources for sharing their expertise with ADE and other districts.

• **Contract with at-risk educators in successful programs** to act as consultants/mentors regarding "promising practices" for at-risk children and to provide peer training.

• **Subsidize training held "on-site" at these demonstration schools.**

7. **The state should designate as its highest priority programs that specify improved language and literacy outcomes.**

Extensive efforts have been expended to evaluate "what works" for Arizona's at-risk population. First and foremost, these efforts have corroborated 20 years of research that points to low language proficiency as a key correlate of academic failure, and low self-esteem as a by-product of such failure. Pilot sites have demonstrated progress toward improving students' language skills and self-esteem. The state should actively promote practices that have contributed to such progress. Promising practices include full-day kindergarten and reducing student-staff ratios at the K-3 level. At the 7-12 level, more "holistic" delivery systems (e.g., alternative schools) appear promising. In general:

- **Advocate increased individualization of instruction for at-risk pupils at all grade levels.**

- **Expand the delivery of vocational/occupational education for older students,** and the use of applied academics in particular.

- **Promote continued development of support services** both on-site (e.g., counseling) as well as with community social service providers (e.g., Family Resource Centers).

8. **The state should develop mechanisms to assist local districts/schools improve parent involvement.**

- **Reinforce requirements that K-3 districts/schools incorporate parent outreach as a condition for initial or continued funding.** Virtually all K-3 personnel say that parent involvement is desirable. They also acknowledge that parent programs are difficult to implement, and that they might not have focused on parent services if not for the requirements of H.B. 2217 (1988).

- **Launch a public awareness campaign to encourage parents to support their children's education.**

- **Allow expenditures for food purchases related to school social events (e.g., refreshments) to support district/school efforts in garnering public support.** Latitude is required regarding what constitutes "acceptable" parent involvement activities. For many districts, efforts to attract parents to the school environment may be most effective when they involve non-academic activities.

- **Advocate secondary-level parent involvement programs.**

- **Disseminate "promising practices" for increasing parent involvement** including: workshops that actively involve parents, face-to-face communication (e.g., home visits), and model strategies used among 7-12 programs.

9. **Arizona's state university teacher training programs should be reconstructed with an emphasis on at-risk issues.**

Two issues are encompassed in this recomendation. First, there needs to be a greater emphasis on at-risk issues for *all* teachers, and a wider range of training opportunities. Second, there needs to be greater focus on recruiting and training minorities to be teachers/administrators.

- **Prepare *all* students in teacher training programs to work with students at risk.**

- **Develop a curriculum for at-risk specialization.**

- **Establish procedures for greater collaboration and articulation among schools and universities in planning and delivering pre-service programs.**

- **Provide a wider range of pre-service training** including: teaching experience with at-risk populations, internships with master teachers, and exposure to multicultural/ multilingual issues.

- **Use demonstration sites for student teaching and internships.**

- **Review the effects of the Pre-Professional Skills Test (PPST), used as a requirement for admission into teacher training programs, on minority admissions.**

- **Provide more training opportunities *within* rural and reservation communities** to assist more *local* personnel in obtaining teaching and administrative certificate with a goal to reduce the "revolving door" syndrome apparent in these communities.

10. **State and local educational agencies should improve in-service training with respect to at-risk populations.**

    - **Use technology for in-service training delivery** (e.g., workshops and college courses offered via satellite).

    - **Establish procedures for greater collaboration and articulation among schools, community colleges, and universities in planning and delivering in-service programs.**

    - **Use demonstration site personnel as peer trainers for new district/school at-risk program staff.**

    - **Extend state efforts to provide in-service training** by offering regularly scheduled at-risk conferences and/or academies, as these have been well-received.

    - **Be a catalyst to influence local districts to reassess existing incentive programs** for staff development, since some district policies regarding teacher compensation for advanced training are perceived as inadequate by the teaching staff.

11. **The Arizona Department of Education should waive annual at-risk funding reapprovals for current pilot sites that have demonstrated success.**

    Pending reapproval of these programs in relation to a revised state comprehensive plan, some districts/schools should be eligible for continued funding and should immediately be placed on an extended evaluation cycle (i.e., every two-three years). At the discretion of the funding agency, however, other continuing districts/schools should be required to submit comprehensive plans and remain on an annual evaluation cycle.

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APPENDIXES

APPENDIX A:

K-3 SUPPLEMENTAL DATA

Table A-1

1990-91 AT-RISK INDICATORS FOR K-3 STUDENTS BY REGION*

At-Risk Indicator (Questions 11-30, *Student Profile*)	URBAN (n = 1336)			RURAL (n = 1158)			RESERVATION (n = 1124)			TOTAL (n = 3618)		
	% Applies	% Affected	Mean Effect	% Applies	% Affected	Mean Effect	% Applies	% Affected	Mean Effect	% Applies	% Affected	Mean Effect
Substandard living conditions	42.3	34.2	3.15	43.1	30.6	2.93	47.2	28.6	2.82	44.1	31.3	2.97
Few reading materials	51.9	47.5	3.39	60.5	50.9	3.15	56.2	42.5	3.09	55.5	47.0	3.21
Low annual income	59.3	45.9	3.10	60.4	41.1	2.89	54.2	31.5	2.84	58.1	39.9	2.96
$\geq$ 2 schools attended	31.0	23.0	3.07	27.5	17.2	2.87	17.1	8.4	2.67	25.6	16.6	2.92
Retained $\geq$ 1 time	15.8	8.4	2.69	13.0	5.5	2.54	20.6	9.4	2.59	16.4	7.8	2.61
Low parent support	43.5	37.5	3.26	41.6	33.3	3.08	61.3	43.8	3.00	48.7	38.1	3.11
Low parent participation	57.4	45.3	3.15	53.5	39.8	2.98	67.3	45.6	2.97	59.3	43.6	3.04
Sibling dropout(s)	6.4	4.9	3.07	9.0	3.5	2.45	11.2	6.1	2.70	8.7	4.8	2.72
Low self-esteem	48.7	44.2	3.33	45.6	38.3	3.15	54.8	44.8	3.14	49.6	42.5	3.21
Chronic health problems	18.4	15.3	3.16	17.4	12.6	2.98	22.2	14.9	2.96	19.3	14.3	3.04
Substance abuse by child	1.5	1.0	2.90	4.2	0.4	2.14	9.5	5.7	2.75	4.9	2.3	2.60
Substance abuse by parents	13.8	12.7	3.41	14.6	10.4	3.03	28.8	21.4	3.13	18.7	14.7	3.18
Abusive home environment	15.3	13.9	3.39	17.8	12.6	3.00	21.4	16.5	3.08	18.0	14.3	3.15
Emot/behavioral problems	31.1	27.5	3.25	30.8	25.0	3.06	38.5	30.0	3.10	33.3	27.4	3.14
"Latch-key" situation	19.2	12.1	3.12	15.6	9.8	2.93	25.6	15.8	2.86	18.7	12.5	2.96
Responsible for other siblings	15.4	10.5	2.90	13.9	7.2	2.71	23.1	11.8	2.63	17.6	9.8	2.74
Transience/high mobility	20.4	17.4	3.25	19.2	15.0	2.97	11.5	5.8	2.74	17.2	13.0	3.04
U.S. immigration (w/in 3 yrs)	12.4	9.5	3.22	18.3	13.0	2.99	3.5	0.5	2.21	11.8	7.8	3.01
No/low level of English	32.0	24.3	3.15	43.5	33.9	3.05	51.7	38.3	3.01	41.8	31.8	3.06
Poor parent-school contacts	42.4	35.6	3.20	42.8	33.9	3.10	56.8	36.8	3.03	47.1	35.5	3.11

* **% Applies** = % population with indicator; **% Affected** = % population for whom indicator is believed to have some - a large negative effect on academic achievement; **Mean Effect** = *degree* of negative effect for all children to whom the indicator applies.

SCALE: 2.00 = Applies with NO negative effect on academic performance; 3.00 = Applies with SOME negative effect on academic performance; 4.00 = Applies with LARGE negative effect on academic performance

Table A-2

RANK ORDER OF INDICATORS BY ACADEMIC ACHIEVEMENT FOR K-3 AT-RISK STUDENTS (N = 3618)*

Very High (n = 203)		High (n = 503)		Average (n = 1233)		Low (n = 1061)		Very Low (n = 608)	
No indicator(s) over	**3.50**	**No indicator(s) over**	**3.50**	**No indicator(s) over**	**3.50**	**No indicator(s) over**	**3.50**	*Few reading materials*	3.54
Sibling dropout(s)	3.00	**No indicator(s) over**	**3.00**	Substance abuse/PAR	3.07	*Few reading materials*	3.28	Substance abuse/PAR	3.49
Health problems	3.00			*Few reading materials*	3.06	*Low self-esteem*	3.27	Abusive home	3.49
		Low self-esteem	2.91	*Low self-esteem*	3.05	Substance abuse/PAR	3.24	*Low self-esteem*	3.44
Substance abuse/PAR	2.89	Substance abuse/PAR	2.89	*Emot/beh problems*	3.00	*Recent immigration*	3.24	*Low parent support*	3.43
Abusive home	2.86	Abusive home	2.86			*Low parent support*	3.22	Transience/mobility	3.41
Emot/beh problems	2.78	*Emot/beh problems*	2.79	Abusive home	2.99	Abusive home	3.20	*Low Eng. proficiency*	3.40
Parent-school contacts	2.71	*Few reading materials*	2.74	Parent-school contacts	2.93	Parent-school contacts	3.20	*Emot/beh problems*	3.39
Few reading materials	2.70	Parent-school contacts	2.70	*Low parent support*	2.89	*Low par. participation*	3.17	*Low par. participation*	3.37
Transience/mobility	2.67	*Low parent support*	2.65	Health problems	2.86	*Low Eng. proficiency*	3.17	Parent-school contacts	3.37
Substandard home	2.63	Health problems	2.61	Substandard home	2.84	*Emot/beh problems*	3.16	"Latch-key" home	3.34
"Latch-key" home	2.63	*Low par. participation*	2.60	*Low par. participation*	2.83	Health problems	3.13	*Recent immigration*	3.31
Low self-esteem	2.61	Substandard home	2.56	"Latch-key" home	2.83	Transience/mobility	3.13	Substandard home	3.29
Low parent support	2.60	*Low annual income*	2.56	*Low Eng. proficiency*	2.83	*Low annual income*	3.09	*Low annual income*	3.26
Low par. participation	2.58	*Low Eng. proficiency*	2.56	*Low annual income*	2.82	"Latch-key" home	3.08	*≥ 2 schools attended*	3.25
Low annual income	2.51	*≥2 schools attended*	2.55	Transience/mobility	2.81	Substandard home	3.06	Health problems	3.25
Substance abuse/CH	2.50	Transience/mobility	2.50	*Recent immigration*	2.74	*≥ 2 schools attended*	3.05	*Care for siblings*	3.06
				≥ 2 schools attended	2.69				
≥2 schools attended	2.49	"Latch-key" home	2.48	*Care for siblings*	2.63	Sibling dropout(s)	2.87	Retained ≥ 1 time	2.94
Low Eng. proficiency	2.33	*Recent immigration*	2.47	Sibling dropout(s)	2.60	*Care for siblings*	2.84	Sibling dropout(s)	2.90
Recent immigration	2.31	*Care for siblings*	2.42			Substance abuse/CH	2.77	Substance abuse/CH	2.76
Care for siblings	2.29	Substance abuse/CH	2.30	Substance abuse/CH	2.47	Retained ≥ 1 time	2.65		
Retained ≥ 1 time	2.27	Retained ≥ 1 time	2.26	Retained ≥ 1 time	2.43			**No indicator(s) under**	**2.50**
		Sibling dropout(s)	2.26			**No indicator(s) under**	**2.50**		

* Table does not include 10 students whose academic performance was not rated; *Italics* = indicators with trend across achievement ratings; Lines divide indicators by range of effect (e.g., 2.0 - 2.49; 2.5 - 2.99)

SCALE: 2.00 = Applies with NO negative effect on academic performance; 3.00 = Applies with SOME negative effect on academic performance; 4.00 = Applies with LARGE negative effect on academic performance

Table A-3: K-3 STUDENT SERVICES/STRATEGIES (1990-91)

K-3 Districts (Phase I)	1) Implement Alternative Delivery Systems				2) Reduce Staff/Student Ratios		3) Alter Classroom Instruction		4) Supplement Individualized Instruction			5) Provide "Special" Activities		6) Extend Services During Summer		7) Add/ Expand Services		8) Enhance On-Going Assessment		9)
	Full-day Kindergarten	Multi-year	Multi-grade	Other	Teachers	Aides	DAP	CAI	Before	During	After	Support	Enrichment	School	Program	Direct Service	Indirect Service	Tests	Teams	Add/Expand Counseling/ Social Services
Ash Fork																				D
Chinle	D												D					D	D	
Coolidge																			D	
Creighton	D									D	D									
Ganado	D			D	D		D						D						D	
Kayenta	D				D	D		D												D
Laveen				D				D		D			D					D		
Littleton						D				D		D	D	D		D	D	D		
Mary C. O'Brien																				
Morristown																				
Murphy		D	D		D			D			D		D	D	D		D	D	D	D
Nogales	D				D											D		D	D	
Osborn	D					D	D					D	D		D	D	D	D		D
Page	D		D			D	D	D			D			D						
Phoenix Elem.		D	D					D	D		D		D		D	D	D	D	D	D
Picacho	D															D		D		D
Roosevelt								D	D		D			D	D				D	
San Carlos	D									D			D			D			D	D
Sanders	D				D					D		D				D	D	D		D
Somerton																				
Whiteriver																				
Wilson																				

LEGEND D = District Funded = At-Risk Funded

Table A-3: K-3 STUDENT SERVICES/STRATEGIES (1990-91) -- *continued*

K-3 Districts (Phase II):	1) Implement Alternative Delivery Systems				2) Reduce Staff/Student Ratios		3) Alter Classroom Instruction		4) Supplement Individualized Instruction			5) Provide "Special" Activities		6) Extend Services During Summer		7) Add/ Expand Services		8) Enhance On-Going Assessment		9)
	Full-day Kindergarten	Multi-year	Multi-grade	Other	Teachers	Aides	DAP	CAI	Before	During	After	Support	Enrichment	School	Program	Direct Service	Indirect Service	Tests	Teams	Add/Expand Counseling/ Social Services
Aguila										D		D	D	D				D		
Avondale	D						D							D						
Buckeye																				
Douglas															D					
Eloy	D							D												
Ft. Thomas																				
Gadsden	D						D	D			D	D								D
Holbrook																				
Hyder	D							D								D				
Isaac													D		D	D				D
Red Mesa	D							D					D	D		D		D		D
Salome			D							D						D				
Stanfield										D						D				D
K-3 Schools (Phase II):																				
Balsz																				
Dysart			D										D	D			D	D	D	
Peach Springs																				
Sunnyside	D								D	D	D									D
Tempe								D							D	D		D	D	D
Tuba City - Gap	D		D					D								D				D
Tuba City - Cameron	D							D								D				

LEGEND D = District-Funded = At-Risk Funded

Table A-4: K-3 PARENT SERVICES/STRATEGIES (1990-91)

K-3 Districts (Phase I)	1) Increase Home/Community Outreach Efforts				2) Increase/Expand Opportunities for School-Based Involvement			3) Upgrade Parent Skills		4) Enhance Counseling/ Social Services
	Formal Communication		Home Visits	Take-home Activities with Follow-up	Formal Parent Volunteer Program	Advisory Roles for At-Risk	Events	Workshops	Structured Classes	
	Written	Contacts								
Ash Fork										
Chinle				D		D				
Coolidge						D				
Creighton										
Ganado			D	D		D	D			D
Kayenta					D			D		D
Laveen										
Littleton										
Mary C. O'Brien										
Morristown			D	D		D			D	D
Murphy										
Nogales										
Osborn	D		D	D	D			D		
Page			D							
Phoenix Elem.	D	D	D				D			D
Picacho										
Roosevelt										
San Carlos		D				D	D			D
Sanders	D		D							
Somerton										
Whiteriver										
Wilson										

LEGEND D=District-Funded = At-Risk Funded

Table A-4: K-3 PARENT SERVICES/STRATEGIES (1990-91) -- *continued*

	1) Increase Home/Community Outreach Efforts				2) Increase/Expand Opportunities for School-Based Involvement			3) Upgrade Parent Skills		4) Enhance Counseling/ Social Services
	Formal Communication		Home Visits	Take-home Activities with Follow-up	Formal Parent Volunteer Program	Advisory Roles for At-Risk	Events	Workshops	Structured Classes	
	Written	Contacts								
K-3 Districts (Phase II):										
Aguila				D		D				
Avondale	D	D	D			D	D			
Buckeye										
Douglas					D	D	D		D	
Eloy						D	D	D		
Ft. Thomas										
Gadsden	D	D	D	D		D				
Holbrook										
Hyder					D	D		D		
Isaac			D		D	D		D	D	D
Red Mesa								D	D	
Salome										D
Stanfield										
K-3 Schools (Phase II):										
Balsz										
Dysart	D	D		D		D		D		
Peach Springs										
Sunnyside										
Tempe			D	D	D	D	D			D
Tuba City- Gap						D	D			
Tuba City - Cameron						D	D			

LEGEND D = District-Funded = At-Risk Funded

Table A-5
K-3 Student Participation Data*
FY 1990-91/Average Number Served

District	Region Code	At-Risk	Not At-Risk	Total	% At-Risk
PHASE I					
Ashfork	2	63	0	63	100
Chinle	3	611	778	1,389	44
Coolidge	2	43	35	78	55
Creighton	1	340	220	560	61
Ganado	3	403	165	568	71
Kayenta	3	745	0	745	100
Laveen	1	810	0	810	100
Littleton	1	551	0	551	100
Mary C. O'Brien	2	65	0	65	100
Morristown	2	30	0	30	100
Murphy	1	1,199	0	1,199	100
Nogales	2	485	1,162	1,647	29
Osborn	1	511	398	909	56
Page	3	297	688	985	30
Phoenix Elementary	1	212	0	212	100
Picacho	2	89	0	89	100
Roosevelt	1	2,921	325	3,246	90
San Carlos	3	532	66	598	89
Sanders	3	321	0	321	100
Somerton	2	452	93	545	83
Whiteriver	3	780	86	866	90
Wilson	1	426	0	426	100
TOTAL		11,886	4,016	15,902	75
PHASE II					
Aguila	2	77	12	89	87
Avondale	1	805	398	1,203	67
Balsz	1	53	29	82	65
Buckeye	2	167	75	242	69
Douglas	2	1,023	319	1,342	76
Dysart	1	430	430	860	100
Eloy	2	626	33	659	95
Ft. Thomas	3	138	29	167	83
Gadsden**	2				
Holbrook	2	162	136	298	54
Hyder	2	75	0	75	100
Isaac	1	1,869	599	2,468	76
Peach Springs	3	110	0	110	100
Red Mesa	3	129	0	129	100
Salome	2	33	28	61	54
Stanfield	2	205	41	246	83
Sunnyside	1	181	186	367	49
Tempe	1	238	71	309	77
Tuba City-Cameron	3	93	1	94	99
Tuba City-Gap	3	34	1	35	97
TOTAL		6,448	2,388	8,836	77

* Based on district-reported numbers of students served

** Offers a Summer School program only

Table A-6

K-3 Student Participation Data - FY 1990-91 Yearly Average

District	Region Code	Student Strategy: Full day kindergarten	Multi-year program	Multi-grade program	Other delivery system	Reduced student/staff rations: additional	Reduced student/staff rations: additional	Developmentally appropriate practices	Computer-assisted instruction integrated in	Supplemental individualized instruction/ tutoring	Instructional support activities	Instructional enrichment activities	Additional/ expanded direct student service facility	Additional/ expanded indirect student service	On-going student assessment	On-going student assessment	Additional/ expanded counseling/ social activities	Total
PHASE I																		
Ashfork	2							63						63				126
Chinle	3					22	30	102	337	*nd			*nd	*nd			58	549
Coolidge	2	33	43				43	43										162
Creighton	1					164	305	340									58	867
Ganado	3						228		[redacted]157	35			153	445				1,014
Kayenta	3		102	32	85			553			553	[redacted]756		553				2,634
Laveen	1	184				598		598			[redacted]822			1,319		23	422	3,966
Littleton	1	121				121		512		204							[redacted]34	1,092
Mary C. O'Brien	2										[redacted]66	[redacted]86		65				197
Morristown										30								30
Murphy	1	326						1,203										1,529
Nogales	2						362			[redacted]331								693
Osborn	1									308						[redacted]120		428
Page	3									30		27	191		66	55	9	428
Phoenix Elementary	1	212				212		212			212							[redacted]
Picacho	2						89	89	89	57	[redacted]80	[redacted]89						501
Roosevelt	1	98			[redacted]163	[redacted]190	98	586			98	93		98				3,324
San Carlos	3					532	532	532	532					532				2,660
Sanders	3		145	145	164		321	321	120									1,216
Somerton	2							452		330	331	302						1,415
Whiteriver	3				780		17	780		42		780	375	780	288	[redacted]66	368	4,216
Wilson	1	124			75		431	426				426	426	426			96	2,430
TOTAL		1,098	290	177	3,267	1,739	2,456	6,812	1,231	1,417	2,170	2,539	1,145	4,281	354	204	1,145	30,325
PHASE II																		
Aguila	2							59					74					133
Avondale	1				16	765	765			765				765	261			3,337
Balsz	1	37				17	17	58			58	58				58		303
Buckeye	2									49		13			30	43	101	236
Douglas	2	11				[redacted]1,034	1,192	1,192	[redacted]1,034	585		[redacted]1,034	*nd					6,082
Dysart	1							430	430									860
Eloy	2							[redacted]657		[redacted]820		596	657					1,910
Ft. Thomas	3					16	28	[redacted]150					159					353
Gadsden**	2																	0
Holbrook	2							149		84								233
Hyder	2							75			75							150
Isaac	1				220	220	220	220		109					135			1,124
Peach Springs	3							110										110
Red Mesa	3						129	129										258
Salome	2				14			30			*nd							44
Stanfield	2					60		107			39	207						413
Sunnyside	1				113			160			178			178				629
Tempe	1	16				22	16	238				[redacted]238		80				610
Tuba City-Cameron	3							93			93							186
Tuba City-Gap	3							34			34							68
TOTAL		64	0	0	361	2,134	2,367	3,891	1,464	1,612	477	2,146	890	1,023	426	101	101	17,059

*nd = part of at risk program, no data available

[redacted] = based on 1 semester's data; no fall/spring data available

Table A-7

K-3 Parent Participation Data
FY 1990-91 Yearly Average

District	Region Code	At-Risk Program Strategy										
		Enhanced written communication	Enhanced verbal communication	Home visits	Take-home activities w/ follow-up	Formal parent volunteer programs	Advisory roles for "at-risk" parents	Events	Parent workshops	Structured classes for parents	Additional / expanded counseling/ social services	Total
PHASE I												
Ashfork	2	78		16				62	9			165
Childe	3	400	30	67		13		27	161		127	825
Coolidge	2	172	54					76	65		1	368
Creighton	1		43	73			9	153	55		28	361
Ganado	3	488							66			554
Kayenta	3			506	466							972
Laveen	1	797	250	15	40	28			*nd		133	1,263
Littleton	1	1,010		93	452	102	*nd	136		19	*nd	1,812
Mary C. O'Brien	2				4				21	13		38
Morristown	2	54					7	58				119
Murphy	1	1,203	1,203					245	486			3,137
Nogales	2								226			226
Osborn	1		78					220	207		9	514
Page	3	232	24				5	39	45		19	364
Phoenix Elementary	1				212				73			285
Picacho	2		44			3		64		15		126
Roosevelt	1	400	98	98	98			425	104		14	1,237
San Carlos	3	212		6		2			35			255
Sanders	3				288				49			337
Somerton	2	486			486				113			1,085
Whiteriver	3	555	555	296	42	54	71	937	40	7	161	2,718
Wilson	1	210				10		249		569		1,038
TOTAL		6,297	2,379	1,170	2,088	212	92	2,691	1,755	623	492	17,799
PHASE II												0
Aguila	2	31	20					33		*nd		34
Avondale	1				550	133			40			723
Balsz	1	65	65	11		19		59	24			243
Buckeye	2	464	61	53						22	64	664
Douglas	2	127	175	27					37			366
Dysart	1					150		300				450
Eloy	2	656	414	58	15	12				40	18	1,213
Ft. Thomas	3	83						68	12			163
Gadsden**	2											0
Holbrook	2	599	8		49			50	16			722
Hyder	2	95		95	64			80				334
Isaac	1	193	136					42				371
Peach Springs	3				*nd				65			65
Red Mesa	3	63	17				34					114
Salome	2			38	72			31	20			161
Stanfield	2	250	125	61	50	38		175	32			731
Sunnyside	1	140	85	159	42	34		36	92		24	612
Tempe	1	85	32						15			132
Tuba City-Cameron	3	55	55	16	48	4			34	3	3	218
Tuba City-Gap	3	11	11	16	42	3			12	3	3	101
TOTAL		2,917	1,204	534	932	393	34	874	399	68	112	7,467

* = Part of at-risk program; no data available

** = Summer school program

Table A-8
K-3 Staff Development Participation Data
FY 1990-91 Yearly Average

Staff Development Strategy							
District	Region Code	Workshops/ Inservices	Conferences/ Academies	Structured/ Formal Classes	Program Meetings	School Visits/ Observations	Total
PHASE I							
Ashfork	2	3	3	0	0	0	6
Chinle	3	151	6	0	3	10	170
Coolidge	2	131	19	5	7	3	165
Creighton	1	206	14	0	236	7	463
Ganado	3	271	52	9	0	14	346
Kayenta	3	17	5	0	0	0	22
Laveen	1	108	3	0	18	0	129
Littleton	1	111	8	6	5	3	133
Mary C. O'Brien	2	29	4	0	22	2	57
Morristown	2	19	5	0	0	0	24
Murphy	1	448	166	10	479	26	1,129
Nogales	2	532	9	22	16	4	583
Osborn	1	237	4	39	59	0	339
Page	3	21	4	16	9	1	51
Phoenix Elementary	1	21	0	5	26	0	52
Picacho	2	5	0	0	0	6	11
Roosevelt	1	64	27	0	31	0	122
San Carlos	3	204	19	0	67	1	291
Sanders	3	107	22	19	89	3	240
Somerton	2	332	46	0	23	0	401
Whiteriver	3	208	45	32	31	1	317
Wilson	1	66	0	0	0	0	66
TOTAL		3,291	461	163	1,121	81	5,117
PHASE II							0
Aguila	2	10	1	0	25	0	36
Avondale	1	20	0	0	55	0	75
Balsz	1	7	4	1	0	4	16
Buckeye	2	73	0	0	3	0	76
Douglas	2	737	170	3	95	6	1,011
Dysart	1	135	3	0	12	0	150
Eloy	2	298	53	7	0	5	363
Ft. Thomas	3	21	2	3	8	0	34
Gadsden**	2						0
Holbrook	2	29	11	4	89	4	137
Hyder	2	66	22	0	29	3	120
Isaac	1	29	6	2	20	3	60
Peach Springs	3	304	33	18	88	5	448
Red Mesa	3	9	4	0	35	0	48
Salome	2	13	4	0	3	0	20
Stanfield	2	241	2	0	1	3	247
Sunnyside	1	100	16	13	5	4	138
Tempe	1	80	4	3	0	9	96
Tuba City-Cameron	3	10	3	0	0	3	16
Tuba City-Gap	3	9	3	0	0	3	15
TOTAL		2,191	341	54	468	52	3,106

** = Summer school only

Table A-9

K-3 INTERVIEWS
FY 1990-91

District	Parents	Staff*			School Board	Community Members	TOTALS
		Admin.	Tchrs.	Other			
Ash Fork	4	1	5	2	-	-	12
Chinle	3	4	13	6	-	-	26
Coolidge	4	2	6	-	-	-	12
Creighton	7	2	8	4	1	1	23
Ganado	1	5	6	6	1	-	19
Kayenta	3	4	10	3	-	-	20
Laveen	10	3	15	2	-	-	30
Littleton	6	3	8	1	1	-	19
MC O'Brien	6	5	4	2	-	2	19
Morristown	6	1	4	5	-	2	18
Murphy	6	5	5	-	-	-	16
Nogales	5	7	6	3	2	-	23
Osborn	2	2	3	1	-	-	8
Page	1	3	11	4	-	-	19
Phx. El.	4	3	5	-	1	-	13
Picacho	9	2	5	3	-	-	19
Roosevelt	8	12	10	6	-	2	38
San Carlos	2	3	5	5	-	-	15
Sanders	6	4	6	-	-	-	16
Somerton	3	3	5	4	2	-	17
Whiteriver	7	3	11	3	1	-	25
Wilson	5	3	5	2	-	-	15
TOTALS	108	80	156	62	9	7	422

Staff categories: Administrators = district administrators, school principals, program directors, etc.; Teachers = classroom teachers, certified program staff; Others = counselors, support staff, speciality staff, aides

Table A-10

K-3 STUDENT SERVICES EVALUATION BY REGION

URBAN/SUBURBAN		RURAL		RESERVATION	
Full day kindergarten	3.68	Additional teacher(s)	3.58	Additional teacher(s)	3.54
Additional teacher(s)	3.66	Full day kindergarten	3.42	Full day kindergarten	3.47
Summer services	3.54	Additional materials	3.38	Additional aide(s)	3.45
DAP/Curr. modifications	3.48	DAP/Curr. modifications	3.37	Additional materials	3.39
Additional materials	3.48	Summer services	3.36	Summer services	3.36
Additional aide(s)	3.43	Additional aide(s)	3.32	Enrichment activities	3.32
Enrichment activities	3.35	Enrichment activities	3.30	Computer use in classroom	3.24
During school tutoring	3.27	Computer use in classroom	3.27	DAP/Curr. modifications	3.21
Before/after school tutoring	3.16	During school tutoring	3.24	During school tutoring	3.16
Computer use in classroom	3.14	Before/after school tutoring	3.13	Before/after school tutoring	3.14
Improved facilities	3.04	Multi-year classroom(s)	3.06	Improved facilities	3.12
Multi-graded classroom(s)	2.99	Improved facilities	3.05	Student assessment	2.89
Counseling/psych. services	2.94	Multi-graded classroom(s)	3.03	Multi-year classroom(s)	2.68
Student assessment	2.93	Student assessment	2.92	Counseling/psych. services	2.55
Multi-year classroom(s)	2.83	Counseling/psych. services	2.88	Multi-graded classroom(s)	2.54
OVERALL SERVICES	**3.35**	**OVERALL SERVICES**	**3.29**	**OVERALL SERVICES**	**3.21**

Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well

K-3 PARENT SERVICES EVALUATION BY REGION

URBAN/SUBURBAN		RURAL		RESERVATION	
More verbal communication	3.31	School social events	3.35	School social events	3.16
School social events	3.26	More verbal communication	3.28	Parent workshops	2.97
Parent workshops	3.16	Parent classes (e.g., GED/ESL)	3.24	Formal home visits	2.87
More written communication	3.13	Formal home visits	3.18	More verbal communication	2.86
Parent classes (e.g., GED/ESL)	3.06	Take-home activities	3.14	Advisory roles for parents	2.76
Formal home visits	3.03	More written communication	3.12	Take-home activities	2.75
Take-home activities	3.03	Advisory roles for parents	3.09	More written communication	2.73
Parent volunteer program(s)	2.86	Parent workshops	3.03	Parent classes (e.g., GED/ESL)	2.71
Advisory roles for parents	2.80	More counseling/psych. services	2.87	Parent volunteer program(s)	2.68
More counseling/psych. services	2.69	Parent volunteer program(s)	2.67	More counseling/psych. services	2.46
OVERALL SERVICES	**3.08**	**OVERALL SERVICES**	**3.16**	**OVERALL SERVICES**	**2.84**

Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well

K-3 STAFF SERVICES EVALUATION BY REGION

URBAN/SUBURBAN		RURAL		RESERVATION	
College/other classes	3.46	College/other classes	3.41	On-site training/consultant	3.33
ADE conferences/academies	3.35	ADE conferences/academies	3.36	ADE conferences/academies	3.26
On-site training/consultant	3.31	Conference/Academies	3.34	Conference/Academies	3.26
Conference/Academies	3.27	On-site training/consultant	3.23	School visits/observation	3.08
Regularly scheduled training	3.19	On-site training/district staff	3.12	On-site training/district staff	3.07
Program planning meetings	3.15	School visits/observation	3.03	College/other classes	3.05
On-site training/district staff	3.12	Program planning meetings	3.00	Program planning meetings	3.05
School visits/observation	3.08	Regularly scheduled training	2.95	Regularly scheduled training	3.00
OVERALL SERVICES	**3.25**	**OVERALL SERVICES**	**3.21**	**OVERALL SERVICES**	**3.16**

Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well

APPENDIX B:

7-12 SUPPLEMENTAL DATA

Table B-1: 7-12 STUDENT SERVICE DELIVERY SYSTEMS (1990-91)[1]

	Alternative Schools	Schools-within-schools	Classes/Labs/Activities			School-wide Reform
			Academic	Vocational	Support	
7-12 Districts (Phase I)						
Creighton		•		•		
Dysart			• X		• X	
Ganado		•	X		X	
Kayenta			X	X	X	X
Nogales	X	•	X		X	
Pinal County Consortium						
–Apache Junction	X	•				
–Casa Grande Elem.		•				
–Casa Grande UHS			X	X		X
–Central AZ Alternative	• X					
–Coolidge Unified		X				
–Mammoth/San Manuel	X					
–Maricopa Unified		X				
–Superior Unified	X		X			
–Santa Cruz Valley UHS			X			
San Carlos				•	•	
Sanders	X			X		
Somerton	•	• •	•			
Sunnyside			X	X	X	
Tucson	X		X		X	
7-12 Districts (Phase II)						
Marana	• X					
Pima Co. Detention Center	• X					

Primary Target Population: • = 7-8 grade component; X = 9-12 grade component

[1]In several cases, one symbol denotes more than one program.

7–12 STUDENT PARTICIPATION DATA
FY 1990–91

7–12 STUDENT PARTICIPATION BY DISTRICT	FALL SEMESTER		SPRING SEMESTER		YEARLY TOTAL		YEARLY AVERAGE	
	# served	# leaving	# served	# leaving	# served	#leaving	# served	# leaving
PHASE I								
CREIGHTON	49	5	72	2	121	7	61	4
DYSART	158	44	148	25	306	69	153	35
GANADO	120	47	154	77	274	124	137	62
KAYENTA*	2466	120	2466	120	4932	240	2466	120
NOGALES*	471	91	471	91	942	182	471	91
PINAL COUNTY CONSORTIUM								
–Apache Junction Unified	181	152	199	62	380	214	190	107
–Casa Grande Elementary	24	4	24	1	48	5	24	3
–Casa Grande UHS	1929	257	1703	150	3632	407	1816	204
–Central Arizona Alternative	116	34	125	36	241	70	121	35
–Coolidge Unified	20	2	19	1	39	3	20	2
–Mammoth/San Manuel Unified	15	4	12	3	27	7	14	4
–Maricopa Unified	25	3	22	1	47	4	24	2
–Santa Cruz Valley UHS	55	6	65	11	120	17	60	9
–Superior Unified	21	0	18	5	39	5	20	3
PINAL COUNTY TOTAL	2386	462	2187	270	4573	732	2287	366
SAN CARLOS	360	0	360	0	720	0	360	0
SANDERS	69	13	51	20	133	33	67	17
SOMERTON**	281	7	281	7	569	14	285	7
SUNNYSIDE	348	107	449	63	904	170	452	85
TUCSON	420	98	598	228	1116	326	558	163
MARANA	107	43	123	78	230	121	115	61
PIMA CO.	487	487	501	501	988	988	494	494
TOTAL PHASE I & II	7722	1524	7861	1482	15583	3006	7792	1503

spring semester figures based on fall data; no spring data available

**based on spring data only dule to refinement in program services & reporting methods*

SCHOOL/COMMUNITY LINKAGES: INSTRUCTIONAL SERVICES

7–12 STUDENT PARTICIPATION BY DISTRICT	FALL SEMESTER		SPRING SEMESTER		YEARLY TOTAL		YEARLY AVERAGE	
	# linkages	# students served	# linkages	# students served	# linkages	# students served	# linkages	# students served
PHASE I								
CREIGHTON	1	40	1	14	2	54	1	27
DYSART	3	28	3	37	6	65	3	33
GANADO**	2	67	*nd	*nd	2	67	1	34
KAYENTA	0	0	*nd	*nd	0	0	0	0
NOGALES	*nd	*nd	*nd	*nd	*nd	*nd	*nd	*nd
PINAL COUNTY CONSORTIUM								
–Apache Junction Unified	0	0	0	0	0	0	0	0
–Casa Grande Elementary	0	0	0	0	0	0	0	0
–Casa Grande UHS	2	45	2	60	4	105	2	53
–Central Arizona Alternative	*nd	*nd	0	0	0	0	0	0
–Coolidge Unified	2	20	2	36	4	56	2	28
–Mammoth/San Manuel	2	13	2	21	4	34	2	17
–Maricopa	0	0	0	0	0	0	0	0
–Santa Cruz Valley UHS	1	55	0	0	1	55	1	28
–Superior	0	0	0	0	0	0	0	0
PINAL COUNTY TOTAL	7	133	6	117	13	250	7	125
SAN CARLOS	0	0	0	0	0	0	0	0
SANDERS	1	32	1	25	2	57	1	29
SOMERTON	0	0	*nd	*nd	0	0	0	0
SUNNYSIDE	0	0	0	0	0	0	0	0
TUCSON	1	44	1	42	2	86	1	43
PHASE II								
MARANA	0	0	2	62	2	62	1	31
PIMA CO.	1	487	1	501	2	988	1	494
TOTAL	23	831	21	798	44	1629	22	815

*no data available

**no spring data available; yearly totals and averages are estimated based on fall data

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SCHOOL/COMMUNITY LINKAGES: VOCATIONAL SERVICES

7-12 STUDENT PARTICIPATION BY DISTRICT	FALL SEMESTER		SPRING SEMESTER		YEARLY TOTAL		YEARLY AVERAGE	
	# linkages	# students served	# linkages	# students served	# linkages	# students served	# linkages	# students served
PHASE I								
CREIGHTON	5	38	5	36	10	74	5	37
DYSART	2	3	4	11	6	14	3	7
GANADO	4	94	*nd	*nd	4	94	2	94
KAYENTA	5	19	*nd	*nd	5	19	3	19
NOGALES	*nd	*nd	*nd	*nd	*nd	*nd	*nd	*nd
PINAL COUNTY CONSORTIUM								
--Apache Junction Unified	8	508	7	557	15	1065	8	533
--Casa Grande Elementary	1	20	2	32	3	52	2	26
--Casa Grande UHS	0	0	0	0	0	0	0	0
--Central Arizona Alternative	*nd	*nd	2	45	2	45	1	23
--Coolidge Unified	4	13	2	3	6	16	3	8
--Mammoth/San Manuel	3	7	2	15	5	22	3	11
--Maricopa	0	0	0	0	0	0	0	0
--Santa Cruz Valley UHS	1	18	1	24	2	42	1	21
--Superior	1	2	1	6	2	8	1	4
PINAL COUNTY TOTAL	18	568	17	682	35	1250	18	625
SAN CARLOS	1	85	2	175	3	260	2	130
SANDERS	1	24	4	82	5	106	3	53
SOMERTON	3	240	*nd	*nd	3	240	2	120
SUNNYSIDE	0	0	0	0	0	0	0	0
TUCSON	1	6	1	6	2	12	1	6
PHASE II								
MARANA	4	58	8	101	12	159	6	80
PIMA CO.	0	0	1	3	1	3	1	2
TOTAL	44	1135	42	1096	86	2231	43	1116

*no data available

SCHOOL/COMMUNITY LINKAGES: SUPPORT SERVICES

7–12 STUDENT PARTICIPATION BY DISTRICT	FALL SEMESTER		SPRING SEMESTER		YEARLY TOTAL		YEARLY AVERAGE	
	# linkages	# students served	# linkages	# students served	# linkages	# students served	# linkages	# students served
PHASE I								
CREIGHTON	2	21	1	2	3	23	2	12
DYSART	14	308	7	137	21	445	11	223
GANADO	7	147	5	42	12	189	0	95
KAYENTA	3	20	*nd	*nd	3	20	2	10
NOGALES	*nd	*nd	*nd	*nd	0	0	0	0
PINAL COUNTY CONSORTIUM					0	0	0	0
–Apache Junction Unified	12	984	11	1015	23	1999	12	1000
–Casa Grande Elementary	5	59	4	84	9	143	5	72
–Casa Grande UHS	0	0	*nd	*nd	0	0	0	0
–Central Arizona Alternative	*nd	*nd	4	269	4	269	2	135
–Coolidge Unified	8	28	8	34	16	62	8	31
–Mammoth/San Manuel	5	18	4	15	9	33	5	17
–Maricopa	1	25	6	198	7	223	4	112
–Santa Cruz Valley UHS	1	55	1	24	2	79	1	40
–Superior	6	49	3	24	9	73	5	37
PINAL COUNTY TOTAL	38	1218	41	1663	79	2881	40	1441
SAN CARLOS	9	146	7	211	16	357	8	179
SANDERS	6	159	1	25	7	184	4	92
SOMERTON	0	0	*nd	*nd	0	0	0	0
SUNNYSIDE	4	5	0	0	4	5	2	3
TUCSON	3	22	1	9	4	31	2	16
PHASE II								
MARANA	1	4	0	0	1	4	1	2
PIMA CO.	4	911	5	1059	9	1970	5	985
TOTAL PHASE I & II	91	2961	68	3148	159	6109	79	3055

*no data available

Table B-6

7-12 Parent Participation Data
FY 1990-91 Yearly Average

	At-Risk Program Strategy							
District	1A-W	1A-V	1B	2C	3A	3B	4	Total
Phase I								
Creighton	18	14	8	4	18		3	64
Dysart		77	89					166
Ganado	375	7	50	62	94		108	695
Kayenta*								0
Nogales	189	205		55	28			476
Pinal Co. Consortium								0
-Apache Junction	125	99	5					228
-Casa Grande Elem		12	8					20
-Casa Grande UHS				550				550
-C.A.A.S.			15	95				109
-Coolidge	12	8	11	7				37
-Mammoth/San Manual		29	3	7	10		5	53
-Maricopa			28	51			8	87
-Santa Cruz			8	1				9
-Superior		26						26
San Carlos	181		97	140	24		31	471
Sanders			17	13	28		21	78
Somerton	464			134	88			686
Sunnyside	170	82	13	24			7	294
Tucson			20	43				63
Total Phase I	1532	557	369	1183	288	0	182	4109
Phase II								
Marana		87	1					88
Pima Co. Detention Ctr**								
Total Phase II		87	1					88
Total 7-12	1532	731	371	1183	288	0	182	4285

LEGEND

1A-W - Enhanced written communication
1A-V - Enhanced verbal communication
1B - Home visits
2A - Take-home activities w/ follow-up
2B - Advisory roles for "at-risk" parents
2C - Events
3A - Parent workshops
3B - Structured classes for parents
4 - Additional/expanded counseling/social services

NOTES

=based on fall data only; activity did not occur in spring or data is incomplete/not available
***program may not legally offer parent services; see program description for details*

7-12 Staff Development Participation Data
FY 1990-91 Yearly Average

Staff Development Strategy						
District	Workshops/ In-services	Conferences/ Academies	Structured/ Formal Classes	Program Meetings	School Visits/ Observations	Total
Phase I						
Creighton	21	17	0	0	3	41
Dysart	1	5	0	15	1	21
Ganado	254	44	1	0	1	299
Kayenta*						0
Nogales	8	6	1	4	0	19
Pinal Co. Consortium						0
-Apache Junction	35	20	2	16	2	73
-Casa Grande Elem.	9	3	2	2	1	15
-Casa Grande H.S.	185	14	10	8	0	217
-Coolidge	16	0	1	16	1	33
-Mammoth/San Manuel	13	8	0	26	2	48
-Maricopa	164	1	13	9	2	188
-Pinal Co. Alt. Ed.	12	7	1	23	3	45
-Santa Cruz Valley	2	2	0	6	0	10
-Superior	10	2	0	15	2	28
San Carlos	65	0	0	39	0	104
Sanders	3	4	5	0	0	11
Somerton	177	3	121	18	1	320
Sunnyside	8	4	0	130	0	142
Tucson	75	19	0	13	1	107
Total Phase I	**1056**	**155**	**154**	**336**	**17**	**1716**
Phase II						
Marana	3	5	2	8	0	18
Pima County	9	7	0	49	6	104
Total Phase II	**12**	**12**	**2**	**56**	**6**	**121**
Total Phase I & II	1068	166	166	392	23	1958

Table B-8

7-12 INTERVIEWS FY 1990-91							
District	Parents	Staff*			School Board	Community Members	TOTALS
		Admin.	Tchrs.	Other			
Creighton	6	2	5	2	1	2	22
Dysart	18	7	13	2	1	2	49
Ganado	6	5	6	4	1	-	25
Kayenta	7	2	2	3	-	-	14
Nogales	4	4	6	5	2	-	28
Pinal County Consortium	35	7	17	12	-	2	83
San Carlos	4	2	1	7	-	-	14
Sanders	6	2	4	3	-	-	18
Somerton	3	4	4	6	2	-	22
Sunnyside	5	8	-	4	1	3	24
Tucson	6	4	6	3	-	2	27
TOTALS	100	45	64	51	8	11	326

Staff categories: Administrators = district administrators, school principals, program directors, etc.; Teachers = classroom teachers, certified program staff; Others = counselors, support staff, speciality staff, aides

Table B-9

7-12 PARENT SERVICES EVALUATION BY REGION

URBAN/SUBURBAN		RURAL		RESERVATION	
School social events	2.80	More counseling/psych. services	2.77	Formal home visits	2.72
More verbal communication	2.72	Parent classes (e.g., GED/ESL)	2.70	School social events	2.71
Formal home visits	2.66	Formal home visits	2.67	Parent classes (e.g., GED/ESL)	2.55
More written communication	2.54	More verbal communication	2.66	More verbal communication	2.46
More counseling/psych. services	2.65	School social events	2.66	More written communication	2.45
Parent classes (e.g., GED/ESL)	2.48	More written communication	2.56	More counseling/psych. services	2.44
Parent workshops	2.40	Parent workshops	2.17	Parent workshops	2.31
OVERALL SERVICES	**2.73**	**OVERALL SERVICES**	**2.65**	**OVERALL SERVICES**	**2.44**

Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well

7-12 STAFF SERVICES EVALUATION BY REGION

URBAN/SUBURBAN		RURAL		RESERVATION	
Conferences/Academies	2.81	Conferences/Academies	2.69	On-site training/consultant	2.60
Program planning meetings	2.79	Program planning meetings	2.68	On-site training/district staff	2.54
On-site training/consultant	2.74	College/other classes	2.66	College/other classes	2.54
Regularly scheduled training	2.72	On-site training/district staff	2.66	Conferences/Academies	2.50
College/other classes	2.68	Regularly scheduled training	2.64	Program planning meetings	2.46
School visits/observation	2.67	On-site training/consultant	2.60	Regularly scheduled training	2.30
On-site training/district staff	2.59	School visits/observation	2.45	School visits/observation	2.29
OVERALL SERVICES	**2.76**	**OVERALL SERVICES**	**2.70**	**OVERALL SERVICES**	**2.58**

Scale: 1.0 = Has not worked at all; 2.0 = Has not worked well; 3.0 = Has worked well; 4.0 = Has worked very well

APPENDIX C:

BUDGET DATA

Table C-1

K-3 Programs Budget Breakdown by Function (excluding Carry Forward)

District	Region Code	DISTRICT-LEVEL ADMINISTRATION		SCHOOL-LEVEL ADMINISTRATION		DIRECT STUDENT SERVICES		PARENT ACTIVITIES		STAFF DEVELOPMENT & TRAINING		PROGRAM EVALUATION		INDIRECT COSTS		DISTRICT TOTAL
		Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total
PHASE I																
Ashfork	2	0	0.00%	1,500	9.87%	7,800	51.35%	3,500	23.04%	2,391	15.74%	0	0.00%		0.00%	15,191
Chirle	3	0	0.00%	0	0.00%	188,757	94.07%	0	0.00%	2,400	1.20%	0	0.00%	9,500	4.73%	200,657
Coolidge	2	0	0.00%	3,800	2.85%	119,830	89.96%	560	0.42%	9,010	6.76%	0	0.00%		0.00%	133,200
Creighton	1	0	0.00%	31,400	12.58%	136,292	54.61%	21,118	8.46%	23,000	9.22%	37,748	15.13%		0.00%	249,558
Ganado	3	5,232	2.54%	0	0.00%	195,078	94.53%	5,232	2.54%	0	0.00%	0	0.00%	825	0.40%	206,367
Kayenta	3	27,594	24.48%	0	0.00%	43,849	38.89%	12,264	10.88%	19,587	17.37%	9,448	8.38%		0.00%	112,742
Laveen	1	0	0.00%	0	0.00%	158,397	96.94%	0	0.00%	0	0.00%	0	0.00%	4,994	3.06%	163,391
Littleton	1	0	0.00%	391	0.21%	166,430	89.61%	11,050	5.95%	2,577	1.39%	0	0.00%	5,282	2.84%	185,730
Mary C. O'Brien	2	0	0.00%	0	0.00%	30,700	51.25%	25,100	41.90%	2,700	4.51%	1,400	2.34%		0.00%	59,900
Morristown	2	20	0.04%	3,181	7.08%	33,020	73.50%	450	1.00%	200	0.45%	0	0.00%	8,056	17.93%	44,927
Murphy	1	0	0.00%	0	0.00%	248,443	97.85%	589	0.23%	0	0.00%	0	0.00%	4,873	1.92%	253,904
Nogales	2	0	0.00%	0	0.00%	198,393	100.00%	0	0.00%	0	0.00%	0	0.00%		0.00%	198,393
Osborn	1	0	0.00%	4,000	3.17%	105,000	83.33%	3,500	2.78%	12,500	9.92%	1,000	0.79%		0.00%	126,000
Page	3	4,000	3.36%	0	0.00%	112,991	94.96%	1,000	0.84%	1,000	0.84%	0	0.00%		0.00%	118,991
Phoenix Elementary	1	0	0.00%	0	0.00%	243,684	90.25%	0	0.00%	9,213	3.41%	2,000	0.74%	15,115	5.60%	270,012
Picacho	2	0	0.00%	2,770	3.97%	59,115	84.70%	3,624	5.19%	2,400	3.44%	1,882	2.70%		0.00%	69,791
Roosevelt	1	11,432	4.66%	0	0.00%	222,862	90.87%	1,000	0.41%	6,658	2.71%	0	0.00%	3,307	1.35%	245,259
San Carlos	3	0	0.00%	17,240	17.41%	73,775	74.51%	4,000	4.04%	4,000	4.04%	0	0.00%		0.00%	99,015
Sanders	3	0	0.00%	30,118	17.13%	123,259	70.09%	600	0.34%	15,542	8.84%	0	0.00%	6,329	3.60%	175,848
Somerton	2	9,900	5.95%	0	0.00%	145,313	87.32%	0	0.00%	1,800	1.08%	9,400	5.65%		0.00%	166,413
Whiteriver	3	0	0.00%	0	0.00%	123,551	81.41%	27,240	17.95%	975	0.64%	0	0.00%		0.00%	151,766
Wilson	1	0	0.00%	3,990	1.44%	262,903	94.84%	7,300	2.63%	3,000	1.08%	0	0.00%		0.00%	277,193
PHASE II																
Aguila	2	Data not submitted in time for analysis														
Avondale	1	0	0.00%	0	0.00%	143,811	93.38%	4,493	2.92%	3,700	2.40%	0	0.00%	2,000	1.30%	154,004
Balsz	1	0	0.00%	0	0.00%	64,565	97.07%	0	0.00%	1,947	2.93%	0	0.00%		0.00%	66,511
Buckeye	2	0	0.00%	830	1.33%	42,426	68.16%	7,554	12.14%	6,387	10.26%	5,048	8.11%		0.00%	62,245
Douglas	2	19,098	5.40%	0	0.00%	317,898	89.84%	0	0.00%	16,868	4.77%	0	0.00%		0.00%	353,864
Dysart	1	0	0.00%	200	0.32%	59,200	95.95%	1,400	2.27%	100	0.16%	0	0.00%	800	1.30%	61,700
Eloy	2	29,400	12.37%	2,000	0.84%	141,803	59.66%	15,924	6.70%	35,035	14.75%	0	0.00%	13,500	5.68%	237,692
Ft. Thomas	3	0	0.00%	0	0.00%	48,616	93.28%	0	0.00%	3,500	6.72%	0	0.00%		0.00%	52,116
Gadsden	2	0	0.00%	4,407	5.43%	51,198	63.07%	1,477	1.82%	1,452	1.79%	588	0.72%	22,054	27.17%	81,175
Holbrook	2	9,217	7.34%	0	0.00%	97,359	77.58%	0	0.00%	18,912	15.07%	0	0.00%		0.00%	125,488
Hyder	2	0	0.00%	0	0.00%	27,731	51.04%	18,927	34.84%	3,336	6.14%	4,338	7.98%		0.00%	54,332
Isaac	1	0	0.00%	0	0.00%	224,966	96.67%	0	0.00%	3,000	1.29%	0	0.00%	4,751	2.04%	232,718
Peach Springs	3	0	0.00%	0	0.00%	14,680	26.82%	2,000	3.65%	36,048	65.87%	2,000	3.65%		0.00%	54,728
Red Mesa	3	0	0.00%	0	0.00%	29,031	89.26%	0	0.00%	2,357	7.25%	0	0.00%	1,136	3.49%	32,525
Salome	2	2,330	10.05%	0	0.00%	18,259	78.79%	1,032	4.45%	1,553	6.70%	0	0.00%		0.00%	23,174
Stanfield	2	Data not submitted														
Sunnyside	1	0	0.00%	0	0.00%	53,919	71.31%	15,698	20.76%	2,556	3.38%	400	0.53%	3,038	4.02%	75,611
Tempe	1	0	0.00%	3,900	4.39%	74 366	83.78%	400	0.45%	8,400	9.46%	0	0.00%	1,694	1.91%	88,760
Tuba City-Cameron	3	22,358	24.09%	0	0.00%	55 464	59.75%	10,000	10.77%	5,000	5.39%	0	0.00%		0.00%	92,822
Tuba City-Gap	3	25,419	25.57%	0	0.00%	5 93	58.94%	10,000	10.06%	5,000	5.03%	0	0.00%	400	0.40%	99,412
TOTAL		166,000	3.67%	109,727	2.00%	4,523,328	82.65%	217,032	3.97%	274,134	5.01%	75,252	1.37%	107,655	1.97%	5,473,127

* Percent reflects percentage of Total FY 1990/91 At-Risk Grant Budget

Table C-2

K-3 Program Budgets without Carry Forward - By Region

District	Region Code	100th Day ADM K-3 Only 1990-91	Number Students Served	Direct Student Services $	Cost/Pupil Student Services	Total At-Risk Budget w/o Carry Forward	Cost/Pupil Total Expenditures	Average Cost Per Pupil
Avondale	1	1,263	1,203	143,811	120	154,004	128	
Balsz	1	1,029	82	64,565	787	66,511	811	
Creighton	1	554	560	136,292	243	249,558	446	
Dysart	1	426	430	59,200	138	61,700	143	
Isaac	1	2,472	2,468	224,966	91	232,718	94	
Laveen	1	798	810	158,397	196	163,391	202	
Littleton	1	589	551	166,430	302	185,730	337	
Murphy	1	1,023	1,199	248,443	207	253,904	212	
Osborn	1	1,726	909	105,000	116	126,000	139	
Phoenix Elementary	1	4,170	212	243,684	1,149	270,012	1,274	
Roosevelt	1	4,902	3,246	222,862	69	245,259	76	
Sunnyside	1	364	367	53,919	147	75,611	206	
Tempe	1	305	309	74,366	241	88,760	287	
Wilson	1	420	426	262,903	617	277,193	651	
								$192
Aguila	2	Data not submitted in time for analysis						
Ashfork	2	67	63	7,800	124	15,191	241	
Buckeye	2	462	242	42,426	175	62,245	257	
Coolidge	2	883	78	119,830	1,536	133,200	1,708	
Douglas	2	1,349	1,342	317,898	237	353,864	264	
Eloy	2	658	659	141,803	215	237,692	361	
Gadsden	2	N/A	134	51,198	382	81,175	606	
Holbrook	2	490	298	97,359	327	125,488	421	
Hyder	2	72	75	27,731	370	54,332	724	
Mary C. O'Brien	2	63	65	30,700	472	59,900	922	
Morristown	2	25	30	33,020	1,101	44,927	1,498	
Nogales	2	1,835	1,647	198,393	120	198,393	120	
Picacho	2	89	89	59,115	664	69,791	784	
Salome	2	56	61	18,259	299	23,174	380	
Somerton	2	544	545	145,313	267	166,413	305	
Stanfield	2	Data not submitted						
								$305
Chinle	3	1,414	1,389	188,757	6	200,657	144	
Ft. Thomas	3	166	167	48,616	291	52,116	312	
Ganado	3	674	745	195,078	262	206,367	277	
Kayenta	3	506	568	43,849	77	112,742	198	
Page	3	1,128	985	112,991	115	118,991	121	
Peach Springs	3	107	110	14,680	133	54,728	498	
Red Mesa	3	131	129	29,031	225	32,525	252	
San Carlos	3	598	598	73,775	123	99,015	166	
Sanders	3	321	321	123,259	384	175,848	548	
Tuba City-Cameron	3	95	94	55,464	590	92,822	987	
Tuba City-Gap	3	34	35	58,593	1,674	99,412	2,840	
Whiteriver	3	868	866	123,551	143	151,766	175	
								$233
TOTAL		32,676	24,107	4,523,328	14,865	5,473,127	20,115	$227

N/A - Not Available

1=Urban/Suburban

2=Rural

3=Reservation

Table C-3

7-12 Programs Budget Breakdown by Function (excluding Carry Forward)

District	Region Code	DISTRICT-LEVEL ADMINISTRATION		SCHOOL-LEVEL ADMINISTRATION		DIRECT STUDENT SERVICES		PARENT ACTIVITIES ACTIVITIES		STAFF DEVELOPMENT & TRAINING		PROGRAM EVALUATION		INDIRECT COSTS		DISTRICT TOTAL
		Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total	%*	Total
PHASE I																
Creighton	1	0	0.00%	31,814	19.17%	109,349	65.87%	10,997	6.62%	5,559	3.35%	5,484	3.30%	2,797	1.68%	166,000
Dysart	1	0	0.00%	32,719	18.03%	119,901	66.05%	24,827	13.68%	1,425	0.79%	0	0.00%	2,645	1.46%	181,517
Ganado	3	3,600	2.41%	0	0.00%	137,675	92.10%	3,820	2.56%	3,805	2.55%	0	0.00%	590	0.39%	149,490
Kayenta	3	0	0.00%	24,182	10.53%	194,429	84.68%	0	0.00%	8,000	3.48%	3,000	1.31%	0	0.00%	229,611
Nogales	2	0	0.00%	25,658	10.71%	213,696	89.20%	0	0.00%	225	0.09%	0	0.00%	0	0.00%	239,579
Pinal Co. Consortium	2	5,700	2.58%	0	0.00%	205,769	93.24%	5,693	2.58%	1,482	0.67%	2,048	0.93%	0	0.00%	220,691
San Carlos	3	3	0.00%	12,212	10.82%	86,157	76.36%	1,500	1.33%	4,600	4.08%	0	0.00%	8,358	7.41%	112,827
Sanders	3	0	0.00%	30,118	17.77%	123,259	72.71%	600	0.35%	15,542	9.17%	0	0.00%	0	0.00%	169,519
Somerton	2	9,900	4.66%	0	0.00%	192,857	90.71%	0	0.00%	1,200	0.56%	8,660	4.07%	0	0.00%	212,617
Sunnyside	1	2,500	1.57%	0	0.00%	153,480	96.48%	700	0.44%	2,400	1.51%	0	0.00%	0	0.00%	159,080
Tucson	1	0	0.00%	8,012	3.69%	177,422	81.66%	12,115	5.58%	2,731	1.26%	10,827	4.98%	6,161	2.84%	217,268
PHASE II																
Marana	2	0	0.00%	0	0.00%	154,392	91.62%	0	0.00%	614	0.36%	0	0.00%	13,500	8.01%	168,506
Pima County	1	782	0.32%	9,074	12.10%	65,144	86.86%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	75,000
TOTAL		22,482	1.16%	172,789	7.55%	1,933,530	84.00%	60,252	2.62%	47,583	2.07%	30,019	1.30%	34,051	1.48%	2,301,705

* Percent reflects percentage of Total FY 1990/91 At-Risk Grant Budget

Table C-4
7-12 Program Budgets without Carry Forward - By Region

District	Region Code	Number Students Served	Direct Student Services $	Cost/Pupil Student Services	Total At-Risk Budget w/o Carry Forward	Cost/Pupil Total Expenditures	Average Cost Per Pupil
Creighton	1	77	109,349	1,420	166,000	2,156	
Dysart	1	192	119,901	624	181,517	945	
Pima County	1	988	65,144	66	75,000	76	
Sunnyside	1	556	153,480	276	159,080	286	
Tucson	1	696	177,422	255	217,268	312	
							$318
Marana	2	166	154,392	930	168,506	1,015	
Nogales	2	471	213,696	454	239,579	509	
Pinal Co. Consortium	2	2649	205,769	78	220,691	83	
Somerton	2	288	192,857	670	212,617	738	
							$235
Ganado	3	201	137,675	685	149,490	744	
Kayenta	3	2466	194,429	79	229,611	93	
San Carlos	3	360	86,157	239	112,827	313	
Sanders	3	64	123,259	1,926	169,519	2,649	
							$214
TOTAL		9,174	$1,933,531	$7,702	$2,301,705	$9,920	$251

1=Urban/Suburban
2=Rural
3=Reservation

APPENDIX D:

LIMITATIONS OF DATA SETS

LIMITATIONS OF DATA SETS

As noted in Chapter 2, the overall research design is conceptually qualitative and, as such, it is particularly subject to scrutiny relative to four criteria: credibility, transferability, dependability, and confirmability. Every effort has been made to protect the study with respect to these criteria by continuously subjecting the methods and findings to internal and external review. Quantitative studies incorporated within the research have employed sampling methods, and results have been analyzed with respect to key variable potentially affecting the reliability and validity of the findings. We are confident in the study, as a whole, and believe it to be credible, transferable, dependable, and subject to confirmation. Yet, specific limitations exist with respect to specific databases, the most pertinent of which will now be addressed briefly.

As reported for K-3 students, **student profile data** reflect the *perceptions* of K-3 teachers. Comparisons of 1989-90 and 1990-91 data lend some credence to the reliability of certain kinds of information reported, but also confirm the need for caution interpreting data as "fact." These data are felt to be accurate and truthful reflections of teachers perceptions; and, preliminary comparisons of these data with available demographic databases tend to support the accuracy of teacher perceptions.

Participation data for students, parents, and staff reported by district personnel, although confirmed and corrected by Morrison Institute staff, contain an unknown margin of error. Particularly, parent and staff numbers, as they are estimated and may reflect duplicated counts, should be used judiciously.

All **survey data** (for 7-12 students and teachers, and K-3 teachers) have been considered regarding their "truth value." For teacher surveys, it is hypothesized that there is some degree of bias in overrating programs and program services. With respect to student survey data, it is believed that there may be some response bias in two mutually exclusive directions. First, some students may have underrated their "at-riskness" with respect to behaviors such as drug and alcohol abuse for fear of repercussions (even though the surveys were anonymous). Second, some students may have overestimated their at-riskness for "shock value." For example, it was brought to the attention of Morrison Institute staff that, in at least one case, students were told to exaggerate their responses in order to present a convincing picture of "at-riskness." Although such factors constitute threats to the validity of survey findings, it is felt that these threats are largely compensated for by sampling methods employed yielding large and proportionately representative survey responses. Suspected "data tampering" occurred among very small n's; other data biases may cancel out each other as they occur in both directions.

Interview data utilized for this report reflect primarily those comments made during spring 1991 site visits. On one hand, many of the interviewees were interviewed several times previously, leading to "diminishing returns" from the most recent interviews. Some local concerns were not repeated, as interviewees felt their site evaluators were already aware of them; likewise, the degree of program impact did not always seem as apparent given the history between the interviewee and site evaluator. On the other hand, in some school districts, there were many new staff interviewed because of high turnover. Comments from these staff members can not always be considered well grounded. Additionally, some parents and staff interviewed expressed fears that their funding might be jeopardized by negative comments and, therefore, may have emphasized only the most positive aspects of their programs. Moreover, because of the difficulty arranging parent interviews through appointments and home visits, the selection process unavoidably tended to favor those parents who are most involved in the schools, most aware of the at-risk program and its specifics, and, probably, most positive toward the school and program. In addition, the use of school officials as translators in some cases may have diluted responses.

Demographic and "impact" data (e.g., achievement test scores) gathered as part of the cohort study, while useful in presenting trends, should *not* be used to make inferences about at-risk program effectiveness. Cohort data are subject to virtually every threat to both internal and external validity. Student history and maturation are definite factors which contribute to the obtained results, as are changes in the nature of programs themselves as they have evolved over time. One other caveat concerns the interpretation of low n's for students included in the longitudinal tracking efforts. There is some propensity to associate low n's with student mobility. While student mobility is indeed a factor that accounts for some reduction in student numbers, there is also the problem of data retrieval. Much information that is missing, preventing a student from being included in the longitudinal analysis, is a result of problems obtaining or reporting data--not a result of student mobility.

Budget information, used in deriving cost-per-pupil estimates, should be viewed with some caution as well. Although operational definitions and detailed instructions were provided to each district, it is likely (based on the number and types of district questions received by Morrison Institute) that not all district reported expenditures from a common point of view. This makes the comparability of data reported subject to question. Further, it is clear that the expertise of the person completing the budget forms may have affected the quality of data submitted. In some cases, the budget manager completed the forms; in other cases, it may have been a program secretary, aide, or volunteer who may not always have understood the nuances of reporting budget information in the manner requested. Another factor that should be considered when viewing the budget data is that some program participants, aware of the fact that the information is being used to determine future funding, may have skewed their expenditures toward the category of "direct student services."

While individual databases are subject to certain threats of validity, and may not be generalizable beyond the scope of the current at-risk pilot sites, the strength of this project rests in its magnitude combined with the fact that no one database takes precedence over another. The factors, programs, or practices that emerge as themes as a result of the analysis may be posited as generally useful for consideration in other settings.

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